

Operation and Service Manual Documents

TUG Model MA Tow Tractor - Rev 19:

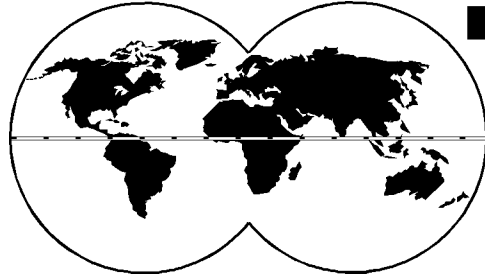
Chapter One: General Information and Operating Instructions.

Chapter Two: Maintenance

Chapter Three: Overhaul

Chapter Four: Illustrated Parts List

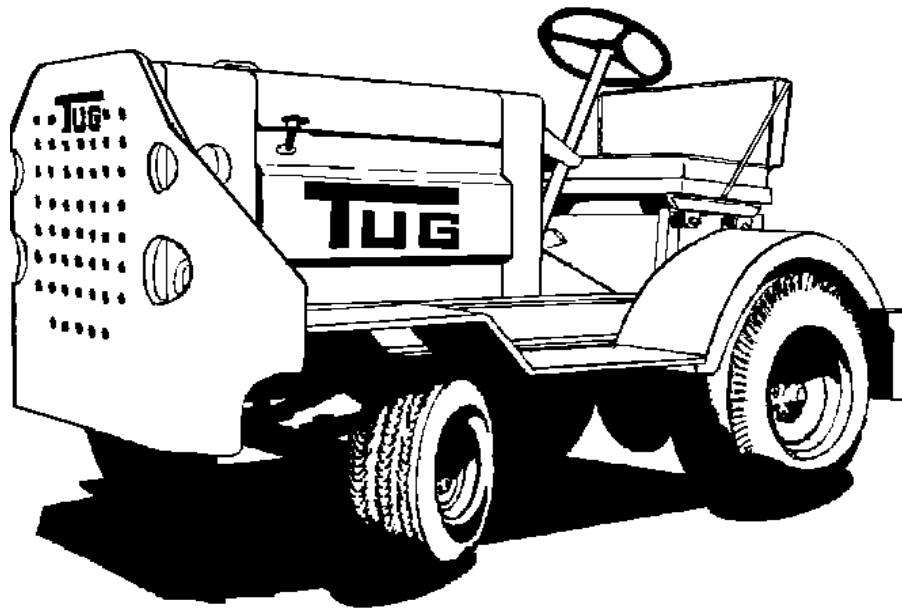
Chapter Five: Appendices



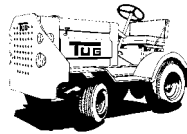
TUG
MANUFACTURING
CORPORATION

MODEL MA TOW TRACTOR

OPERATION AND SERVICE MANUAL

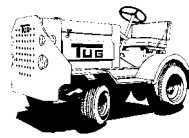


ORIGINALLY ISSUED MARCH 22, 1974



NOTE: The information contained in this publication is intended exclusively for the use of Tug Manufacturing Corporation and its customers. Disclosure to non-Tug customers may result in legal action by Tug Manufacturing Corporation.

Note: The information contained in this document is intended to be accurate and up to date at the time of original issue. Tug Manufacturing Corporation reserves the right to update the information in this document, without warning, as deemed prudent or necessary by Tug Manufacturing Corporation.



INTRODUCTION TO THE OPERATION AND SERVICE MANUAL

This manual establishes the operation and maintenance procedures that are to be used by operators of the Tug Manufacturing Corporation Models MA-30, MA-40, MA-50, MA-60, MA-70 & MA-80 Tow Tractors.

During recent years, the importance of Materials Handling (the physical movement of materials) has received serious and concentrated study. Due to the need for increased economy in today's industry, new and more efficient methods have become necessary for the handling and storage of materials.

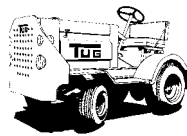
Forklift and reach trucks are the well established implements utilized for stocking loads, often stacking them extremely high. They have enabled more effective utilization of valuable storage space. While these vehicles are frequently operated for transferring loads over short distances, their use is not economical when lengthy traveling is involved.

For lengthy traveling, the tow tractor is a valuable tool, especially when used in conjunction with a trailer train. This system provides an economical mode of transferring a large amount of material or goods over a long distance. The more specialized forklifts are then left to concentrate on the high stacking operations for which they were designed.

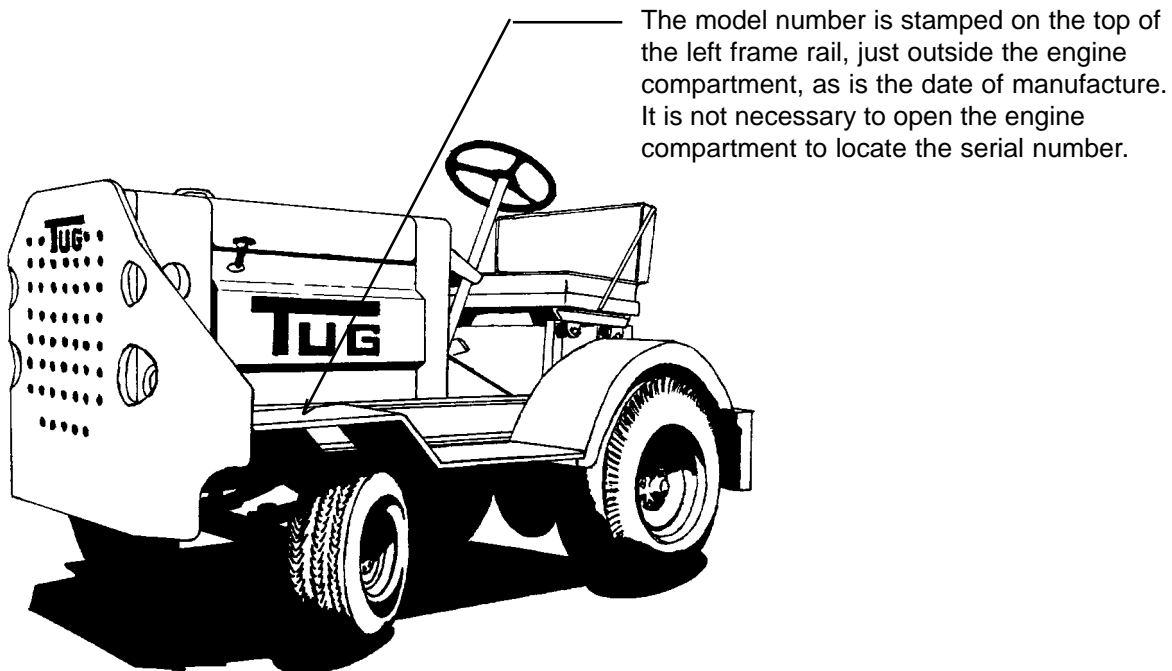
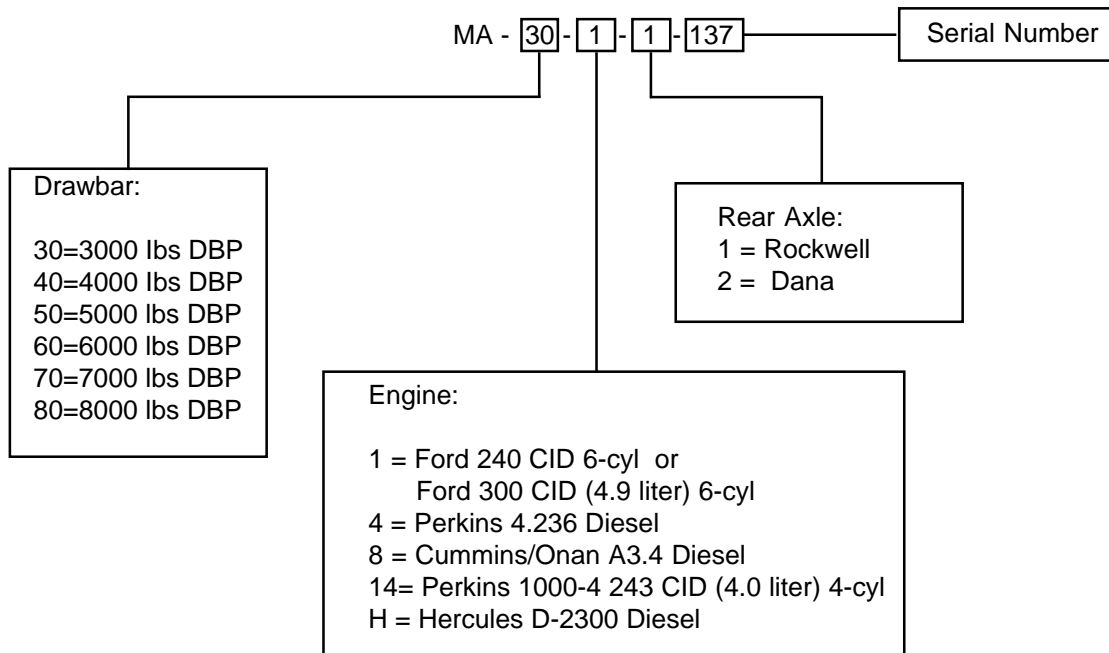
To accomplish productive movement of materials, one more important factor must be considered. **The operator must be a skilled and responsible person.** This expertise should not be solely based on his ability to drive, but on his ability to identify and understand the various pieces of equipment related to his job.

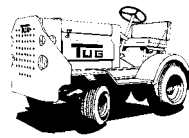
Certain operation and maintenance procedures have been covered in greater depth in a series of video tapes which are available from Tug Manufacturing Corporation. These video tapes include the following:

- MA-1 Proper Operation
- C148 Ford 300 L.P. System
- C149 Basic 12 Volt Electrics
- C144 Rockwell Steer Axle Repairs (With Brakes)
- C145 Rockwell Drive Axle Repairs
- C147 Ford 300 Carburetor Overhaul



MODEL NUMBER CODING OF MA TOW TRACTORS





TUG Manufacturing Corporation

LIMITED WARRANTY

TUG Manufacturing Corporation ("TUG") warrants to the original purchaser all TUG equipment against defective materials or workmanship (but not against failures or defects resulting, directly or indirectly, from accident, abuse, modification, alteration, lack of recommended maintenance, use of non-recommended fuels, normal wear and tear, misuse, use of parts and components not manufactured or supplied by TUG, or use for purposes not reasonably intended) for a period of one (1) year from date of shipment to the original purchaser or the first 1,000 hours of operation, whichever occurs first. The warranty of purchased functional components is limited to that specified by the component manufacturer.

THIS LIMITED WARRANTY IS NOT ASSIGNABLE BY THE ORIGINAL PURCHASER OF TUG EQUIPMENT. ANY PURPORTED ASSIGNMENT OF THIS LIMITED WARRANTY SHALL BE VOID AND TUG SHALL HAVE NO OBLIGATION TO HONOR OR PERFORM UNDER THIS LIMITED WARRANTY IN FAVOR OF ANY PERSON OR ENTITY OTHER THAN THE ORIGINAL PURCHASER.

TUG will, at its sole option, repair or replace any component, part or parts, if found on examination by TUG to be defective and if the necessary return charges are prepaid by the original purchaser. Installation labor will be the original purchaser's responsibility. The above only applies to TUG manufactured components. Purchased components will be handled based on their individual warranties.

THE ABOVE WARRANTY AND THE ABOVE OBLIGATION TO REPAIR OR REPLACE ARE COMPLETE AND INCLUSIVE. THIS LIMITED WARRANTY IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. ANY IMPLIED WARRANTIES WHICH MAY BE FOUND IN CONNECTION WITH THE PRODUCT ARE HEREBY LIMITED IN DURATION TO NINETY (90) DAYS FROM THE DATE OF SHIPMENT TO THE ORIGINAL PURCHASER.

THE SOLE AND EXCLUSIVE REMEDY OF ANY PERSON, AND THE SOLE AND EXCLUSIVE OBLIGATION AND LIABILITY OF TUG WITH RESPECT TO TUG EQUIPMENT IS THE LIMITED WARRANTY SET FORTH HEREIN. TUG SHALL NOT BE RESPONSIBLE OR LIABLE FOR ANY DAMAGES, WHETHER ARISING IN CONTRACT OR IN TORT, OR FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING LOSS OF USE AND LOST PROFITS, IN CONNECTION WITH THE PURCHASE, SALES, SHIPMENT, SERVICE, REPAIR OR OPERATION OF ANY TUG EQUIPMENT. IN NO EVENT SHALL TUG'S LIABILITY TO ANY PERSON EXCEED THE PURCHASE PRICE OF THE TUG EQUIPMENT.

Any expense incurred without TUG's prior consent for repairs or replacement will not be allowed. All modifications by the end-user must be approved by TUG in writing, in order that the expressed warranty remain in effect.

TUG reserves the right to make changes in design and changes or improvements upon its products without any obligation upon itself to install the same upon its products theretofore manufactured.

Tractors with known failed or defective parts must be immediately removed from service.

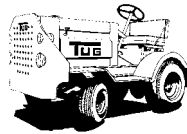
This Warranty requires proper and timely maintenance and periodic inspections of the TUG tow tractor as indicated in the operator's manual furnished with each TUG unit. The cost of routine or required maintenance and service is the responsibility of the customer. The customer is required to keep documented evidence of when and by whom maintenance and service are performed.

Inquiries concerning this policy should be addressed to:

TUG Manufacturing Corporation
2652 South Main Street
P.O. Box 1447
Kennesaw, GA 30144-3520 USA

Operations Phone Number: (770) 422-7233
Sales Phone Number: (770) 422-7230
TUG Shop Phone: (800) 989-8499 or (770) 422-8021
TUG Shop Fax Number: (770) 422-8730

<http://www.tugmanufacturing.com>



Dear Customer,

On behalf of the entire Tug Team, I want to both thank you and congratulate you for purchasing your Tug MA Tow Tractor. You have made an excellent choice.

At Tug, our first priority is to build the toughest, most capable and safest vehicle available in the marketplace. We believe we do that. The Safety chapter in this manual discusses several safety items that are built into your new product as standard equipment.

Additionally, Tug makes available numerous special safety items which may be especially suited to your particular application. You may have already chosen to have your new unit equipped with some or all of these features. These additional safety options are also listed in the Safety chapter for your convenience, so that you have a complete list of all available safety features.

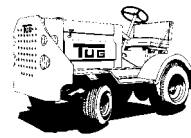
Safety is important to you as the owner of this equipment, and to Tug as the manufacturer. That is why we urge you to closely adhere to our recommended preventive maintenance program, and to thoroughly train all of your operating and maintenance personnel in the proper use and maintenance procedures for your vehicles. Tug is always anxious to help in this capacity wherever we are needed.

We go to a great deal of expense to prepare the most current and comprehensive Operation and Service Manuals in the industry. We urge you to ensure that no one operates or services your vehicles without first reading and understanding this manual. This will keep us in a safety partnership which will benefit both your company and ours.

Sincerely,



Don L. Chapman
President

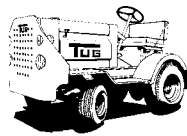


Editor's Note:

The number one priority at Tug Manufacturing is always to provide the very best, safest and most reliable equipment available anywhere in the world. An important part of meeting this goal is providing you, the customer, with the most accurate and complete technical documentation in the industry. Whether you are an engineer, a maintenance technician, an operator or a spare parts purchasing agent, this Operation and Service Manual has been designed to make your part of maintaining and operating your Tug equipment as safe, simple and cost efficient as possible.

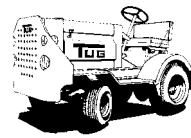
At Tug, we are the best at what we do. However, we maintain that where serving the customer's needs is concerned, we always leave room for improvement. That is why we have included the Customer Manual Revision Forms located at the back of this manual. If you have any comments, corrections or omissions that you feel should be addressed, we ask that you please fill out one of these simple, self-addressed forms, add postage and mail it back to us. We will promptly and seriously consider the problem and take appropriate action.

Please accept our personal thanks for giving all of us at Tug Manufacturing the pleasure of meeting your ground support equipment needs.

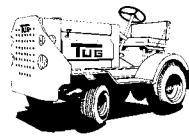


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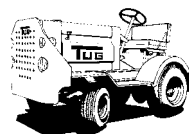
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AUG 25, 1987	-	REVISION #14	
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DEC 1995	-	REVISION #18	(RE-ISSUED)
<u>1997</u>	-	<u>REVISION #19</u>	
JAN 1997	-	REVISION #19A	
JUNE 1997	-	REVISION #19B	
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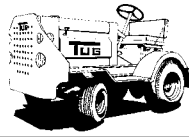
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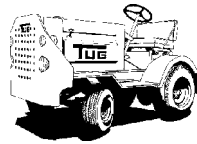
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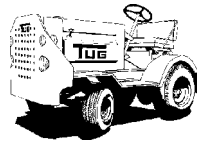
SAFETY

Operator and Mechanic safety is an extremely high priority Tug Manufacturing; so much so, in fact, that every component is specifically designed and carefully built to produce the safest equipment available today. However, safety is more than quality design and construction. It also requires proper operation and maintenance practices. That is why we have devoted this chapter of the Operation and Service Manual entirely to Safety. **THIS CHAPTER MUST BE READ AND UNDERSTOOD BY EVERY OPERATOR AND MECHANIC THAT MAY BE INVOLVED WITH THIS EQUIPMENT.** When the design features and precautions with which this vehicle is equipped are combined with proper safety practices and good common sense, the Tug Model MA tow tractor is one of the safest tractors available today.

The following is a list of the topics covered in this chapter.

- A. Standard Safety Features List
- B. Available Safety Items as Extra Cost Options
- C. Operator Responsibilities
- D. Mechanic Responsibilities
- E. Dry Chemical (Purple K) Fire Extinguisher Use and Maintenance

Tug Manufacturing strongly recommends that this chapter be reproduced and bound in the **Operator's Safety Instruction Book** along with safety rules for the stations where this equipment will be operated and/or maintained.



A. STANDARD SAFETY FEATURES

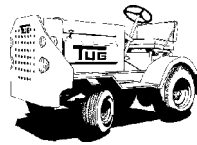
The following features are standard equipment on every Tug MA Tow Tractor.

1. Recessed Headlights
2. Combination tail and stop lights
3. Hood lock and double hood latches
4. Dual independent, power boosted disc brake systems
5. Independent park brake on drive shaft
6. Adjustable over center park brake hand lever
7. Lighted transmission shift control
8. Neutral only start switch in transmission shift control
9. Engine speed governor
10. Automatic transmission
11. Rear hitch visibility from the seat
12. Low center of gravity
13. Ease of maneuverability
14. Easily operated horn
15. Labelled controls
16. Reflectors
17. High central operator seating for easy mounting/dismounting and optimum visibility.
18. Seat belts
19. Nonslip covering on running boards and floor boards.
20. Nonslip "Morton Cast" surface on brake pedal.

B. AVAILABLE SAFETY ITEMS AS EXTRA COST OPTIONS

The following features are available as extra cost items on the Tug MA Tow Tractor.

1. Retracting seat belts.
2. Backup alarm.
3. Overhead guard.
4. Cab with tempered glass, defroster and wiper.
5. Backup lights
6. Turn signals with hazard warning
7. Amber flashing light.
8. Amber strobe light.
9. Mud and snow tires.
10. Reflective striping
11. Work lights
12. Ryder Safe Seat and Control Module
13. Additional ballast weight



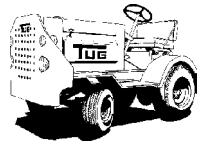
C. OPERATOR RESPONSIBILITIES

This chapter must be read and thoroughly understood prior to operating or performing any maintenance on this equipment.



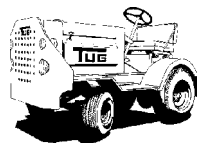
WARNING: FAILURE TO COMPLY WITH THE FOLLOWING SAFETY PRECAUTIONS CAN RESULT IN SERIOUS INJURY OR DEATH AS WELL AS EQUIPMENT DAMAGE.

1. **Always** follow Station Safety Rules. Obtain a written list before operating this tractor if one is not already posted.
2. Before using this tractor, **Always** check it for proper operation and condition of lights, brakes, park brake, steering, horn and tires.
3. **Do not** operate a tractor with defective brakes, steering, tires, horn, parking brake or lights. Refer to the maintenance section of the operation and service manual.
4. **Always** keep hands and feet away from rotating parts and tires. Wear secured clothing.
5. **Always** wear suitable footwear when operating this equipment, and avoid loose-fitting clothing that might get caught in moving parts.
6. **Always** bring unit to a complete stop before dismounting or shifting from forward to reverse or reverse to forward.
7. **Do not** shift transmission into gear with engine above idle speed. Keep foot off accelerator when shifting.
8. **Always** check path clear prior to backing:
 - a. Check local station rules and sound horn if permitted prior to backing.
 - b. If sounding the horn is not permitted, follow applicable safety rules for other personnel prior to moving.
9. **Always** be sure load is secured before moving.
10. **Always** use safety chains between wagons to control uncoupled wagons from accidental hitch releases.
11. **Always** use particular caution when in congested areas and around blind corners and rows of carts. Be alert for other equipment and personnel.
12. **Never** operate at speeds inconsistent with operating conditions. Always limit speed to ensure adequate time for braking in an emergency.
13. **Do not** use tractor to push other equipment. Use proper towing equipment.



C. OPERATOR RESPONSIBILITIES (CONT)

14. **Do not** allow tractor to be pushed by other equipment. Use proper towing equipment.
15. **Do not** tamper with the engine speed governor.
16. **Do not** tow objects from any point on the tractor other than the hitch provided. **Towing from a point above the rear axle center line could cause the tractor to roll over backwards.**
17. **Do not** disconnect or otherwise disable Ryder Safe Seat system if so equipped.
18. **Do not** remove radiator cap when the engine is hot, as serious burns may result. Allow radiator to cool before removing cap.
19. **Always** be sure the load is contained within the bulkheads of the wagons. Without bulkheads, a sudden stop could cause the load to shift onto the tractor.
20. **Never** refuel unit when the engine is running.
21. **Do not** fill the fuel cell above the bottom of filler screen. **Do not overfill.** Clean off any spilled oil or fuel.
22. **Do not** smoke while refueling.
23. **Do not** store, spill or use fuel near an open flame.
24. **Do not** check engine oil while engine is running.
25. **Do not** use the battery in this unit to start other vehicles.
26. **Do not** drive up or down hills with slopes greater than 15 degrees, or drive across any slope.
27. **Always** leave room when stopping or starting on hills to allow for slight roll downhill.
28. **Never** engage in "horseplay" with the tractor
29. **Always** exercise common sense, stay alert and keep aware of what is happening around the tractor at all times.



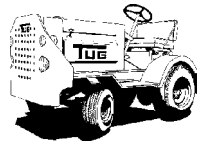
D. MECHANIC RESPONSIBILITIES

This chapter must be read and thoroughly understood prior to performing any maintenance on this equipment.



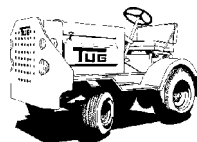
WARNING: FAILURE TO COMPLY WITH THE FOLLOWING SAFETY PRECAUTIONS CAN RESULT IN SERIOUS INJURY OR DEATH AS WELL AS EQUIPMENT DAMAGE.

1. **Always** follow Station Safety Rules. If a written list of the safety rules is not posted at the station, obtain one prior to operating this tractor.
2. **Always** review the "Operator Responsibilities" section of this chapter prior to operating this equipment.
3. **Always** keep hands and feet away from rotating parts and tires. Wear secured clothing.
4. **Always** wear suitable footwear when operating or servicing this equipment and avoid loose fitting clothing that might get caught in moving parts.
5. **Do not** use the tractor to push other equipment. Use the proper towing equipment.
6. **Do not** allow the tractor to be pushed by other equipment. Use the proper towing equipment.
7. **Always** stop the engine when adjusting fan and alternator belts.
8. **Always** keep hands clear of the cooling fan
9. **Do not** remove radiator cap when the engine is hot, as serious burns may result. Allow radiator to cool before removing cap.
10. **Do not** check engine oil while the engine is running.
11. **Always** disconnect the battery negative cable when working on the engine or under the hood.
12. If electrolyte is spilled, always wash hands or clothing immediately.
13. **Do not** touch hot engine, exhaust or hydraulic components as serious burns may result.
14. **Do not** smoke near the battery. Fumes from charging electrolyte are explosive. Always keep the battery away from sparks, flame and smoking materials.
15. **Always** remove metal bracelets, watch bands, etc. prior to installing, removing or servicing the battery.
16. **Do not** short the battery terminals.



D. MECHANIC RESPONSIBILITIES (CONT)

17. When connecting battery, the positive terminal must **always** be connected first to prevent sparks from accidental grounding.
 18. Check governor operation and set at 2400 RPM max.
 19. **Do not** substitute throttle return springs with lighter or other springs.
 20. Check brakes and fill master cylinder with DOT 3 brake fluid.
 21. Check steering for excessive backlash and adjust as required.
 22. Check all lights.
 23. Check horn operation.
 24. Check neutral start only switch for proper adjustment and operation.
 25. **Do not** disconnect or otherwise disable the Ryder Safe Seat system if so equipped.
 26. Check tire and wheel condition along with proper inflation pressures. **Unless beads are seated when mounting tires, over-inflation can result in explosion.**
 27. Torque all lug nuts to 100 ft. lbs.
 28. **Always** use proper lifting equipment safely when removing or replacing heavy components.
 29. When working underneath the tractor, be sure it is supported properly on secure jack stands. **Do not** rely on hydraulic jacks to support the tractor.
 30. If the tractor is on a hydraulic or air operated lift, **always** be sure the safety support or lock is in position prior to working under the tractor.
 31. **Always** use a proper transmission jack and secure the transmission when removing or replacing it.
 32. **Always** jack the drive wheels off the floor when troubleshooting the drive system.
 33. **Never** refuel the unit while the engine is running.
 34. **Do not** fill the fuel cell above the bottom of filler screen. Do not overfill. Clean off any spilled oil or fuel.
 35. **Do not** smoke while refueling.
 36. **Do not** store, spill or use fuel near an open flame.
 37. **Do not** use the battery in this unit to start other vehicles.
-



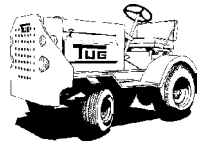
38. **Do not** attempt to install or adjust control cables with the engine running.
39. **Always** replace a control cable which exhibits any gradual or sudden increase in no-load friction or resistance or decrease in usable stroke, or which have moisture inside or have been frozen.
40. **Do not** use heat to attempt to dry or thaw a control cable.
41. **Do not** remove the seats from a control cable or attempt to lubricate it. Any control cable which exhibits possible lubrication problems should be replaced.
42. **Do not** attempt to repair or modify a control cable. Any damaged control cable should be replaced immediately.
43. **Always** avoid exposing control cables to fuels, oils, chemicals, paint, water or dirt as damage may result.
44. **Always** adjust each control cable so that the utilized stroke of the cable is centered within the cable's available stroke.
45. **Always** deflate a tire and wheel assembly prior to removing it for servicing or dismounting.
46. **Do not** use wheels or wheel components that are cracked, bent, pitted or corroded. Insure all wheel components are of the same type and size and that wheel size and tire size match. Inspect all components carefully prior to use.
47. **Do not** attempt to seat a tire bead or side or lock ring by using inflation pressure or any flammable or explosive substance such as starting fluid or ether. Never inflate a tire beyond 40 psi to seat tire beads.
48. **Do not** hammer, pry or weld on or near an inflated or partially inflated wheel and tire assembly.
49. **Do not** rework, weld, heat or braze any wheel parts for any reason.
50. **Always** use a safety cage or other restraining device and a clip-on air chuck with a remote valve and pressure gauge when inflating a tire. Insure the tire and wheel assembly is properly assembled prior to inflating it. Visually inspect it for proper seating of beads and side or lock rings prior to removing it from the cage.
51. **Do not** add air to a tire that has been in service with less than 80% recommended pressure without first fully deflating, removing, disassembling and inspecting the tire assembly for damage.

Recommended Tire Pressure

80% Recommended Pressure

40 psi
45 psi
60 psi

32 psi
36 psi
48 psi

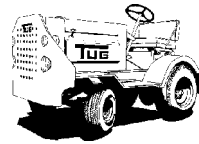


D. MECHANIC RESPONSIBILITIES (CONT)

- 52. **Immediately** replace any parts that show wear or deterioration.
- 53. Check the condition and tightness of all fasteners. **Always** use Grade 8 heat treated bolts throughout the unit. Grade 8 heat treated bolts can be identified by six lines on the bolt head.
- 54. **Always** keep good maintenance records.
- 55. **Never** engage in "horseplay" with the tractor.
- 56. **Always** exercise good common sense, stay alert and be aware of what is happening around the tractor at all times. Take nothing for granted when the safety of the tractor or the operator is at stake. Remember, the operator is depending on you to provide him with a safe tractor.



WARNING: MODIFICATIONS TO THIS UNIT ARE TO BE MADE ONLY BY THE ORIGINAL MANUFACTURER OR A CERTIFIED TESTING LABORATORY.



E. DRY CHEMICAL (PURPLE K) FIRE EXTINGUISHER USE AND MAINTENANCE

Dry chemical fire extinguishers are provided as optional safety equipment on some MA tow tractors. To be effective in combatting small fires, these devices must be properly maintained and the operator must have a thorough knowledge of their operation.

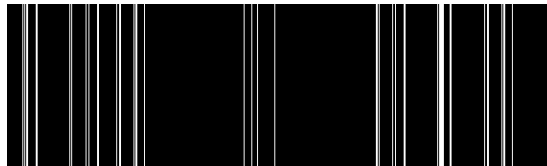


WARNING: THESE FIRE EXTINGUISHERS SHOULD NEVER BE USED TO FIGHT LARGE FIRES. FIRE SPREADS RAPIDLY AND A FIRE WHICH EXCEEDS THE CAPACITY OF A PORTABLE FIRE EXTINGUISHER IS LIKELY TO QUICKLY OVERCOME THE FIRE FIGHTER, RESULTING IN SERIOUS INJURY OR DEATH. AS SOON AS ANY FIRE STARTS, THE LOCAL FIRE DEPARTMENT SHOULD BE NOTIFIED IMMEDIATELY AS ANY FIRE CAN QUICKLY GROW TO A POINT AT WHICH IT CAN ONLY BE EFFECTIVELY COMBATTED USING LARGE QUANTITIES OF WATER OR OTHER MEDIUM.

Three things are required to sustain a fire. These are fuel (any combustible material such as paper, petroleum based fluids, etc.), heat and oxygen (in the air). Removing any one of these elements is sufficient and necessary to put out a fire. Dry chemical fire extinguishing agents put out fire by removing the oxygen from (smothering) the fire.

To use the dry chemical fire extinguisher to combat a fire:

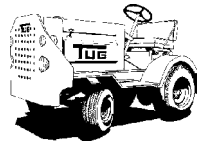
1. Remove the fuel and/or heat source of the fire if at all possible. If the fire is in an engine, turn off the engine. If the fire is in electrical equipment, turn off the electrical power to the burning equipment. If the fire is a combustible liquid fire, attempt, if possible, to shut off the flow of the combustible liquid to the fire.



2. Hold the extinguisher upright and remove the ring pin from the handle by breaking the plastic seal and pulling the pin out.
3. Stand approximately 8 feet from the base of the fire.
4. Aim the nozzle at the base of the fire and squeeze the lever. Apply the extinguishing agent to the base of fire using a side-to-side sweeping motion.



fire
the



E. DRY CHEMICAL FIRE EXTINGUISHER USE AND MAINTENANCE (CONT)

WARNING: DO NOT DISTURB THE DRY CHEMICAL EXTINGUISHING AGENT ONCE IT HAS BEEN APPLIED UNTIL THE FUEL HAS COMPLETELY COOLED. THE DRY CHEMICAL EXTINGUISHING AGENT PUTS OUT FIRE BY SMOTHERING IT. IF IT IS REMOVED FROM THE MATERIAL WHICH WAS BURNING WHILE THE MATERIAL IS STILL HOT, EXPOSURE TO THE OXYGEN IN THE AIR CAN RESULT IN REFLASH OF THE FIRE.

MAINTAINING THE DRY CHEMICAL FIRE EXTINGUISHER:

EVERY 30 DAYS: Fire extinguishers must be visually inspected upon initial placement into service and every 30 days thereafter.

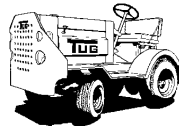
Inspect for:

1. Proper pressure as indicated by the pressure gauge near the top of the extinguisher. The needle should be in the green region.
2. Cleanliness. Remove any dirt, oil, grease, etc. Check for chemical build Up.
3. Damage. Ensure that the ring pin and plastic seal are intact and properly installed and that the extinguisher shows no sign of damage.
4. Proper installation. Be sure that the extinguisher is properly installed and that installation devices are not loose or damaged.
5. Interference. Ensure that the extinguisher is easily accessible and can be quickly removed from its installation device in case of emergency.

ANNUALLY: Fire extinguishers must be serviced by a licensed company at least annually or when indicated by an inspection.

EVERY 6 YEARS: Dry chemical fire extinguishers must be emptied, inspected and overhauled by a licensed company at least every six years.

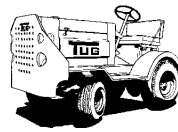
EVERY 12 YEARS: Dry chemical fire extinguishers must be hydrostatically pressure tested by a licensed company at least every twelve years.



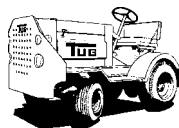
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I. DESCRIPTION

A. TRACTOR

As shown in Figure 1, the TUG tractor is a four wheeled, 2 wheel drive, with or without a cab, heavy-duty towing vehicle. It incorporates:

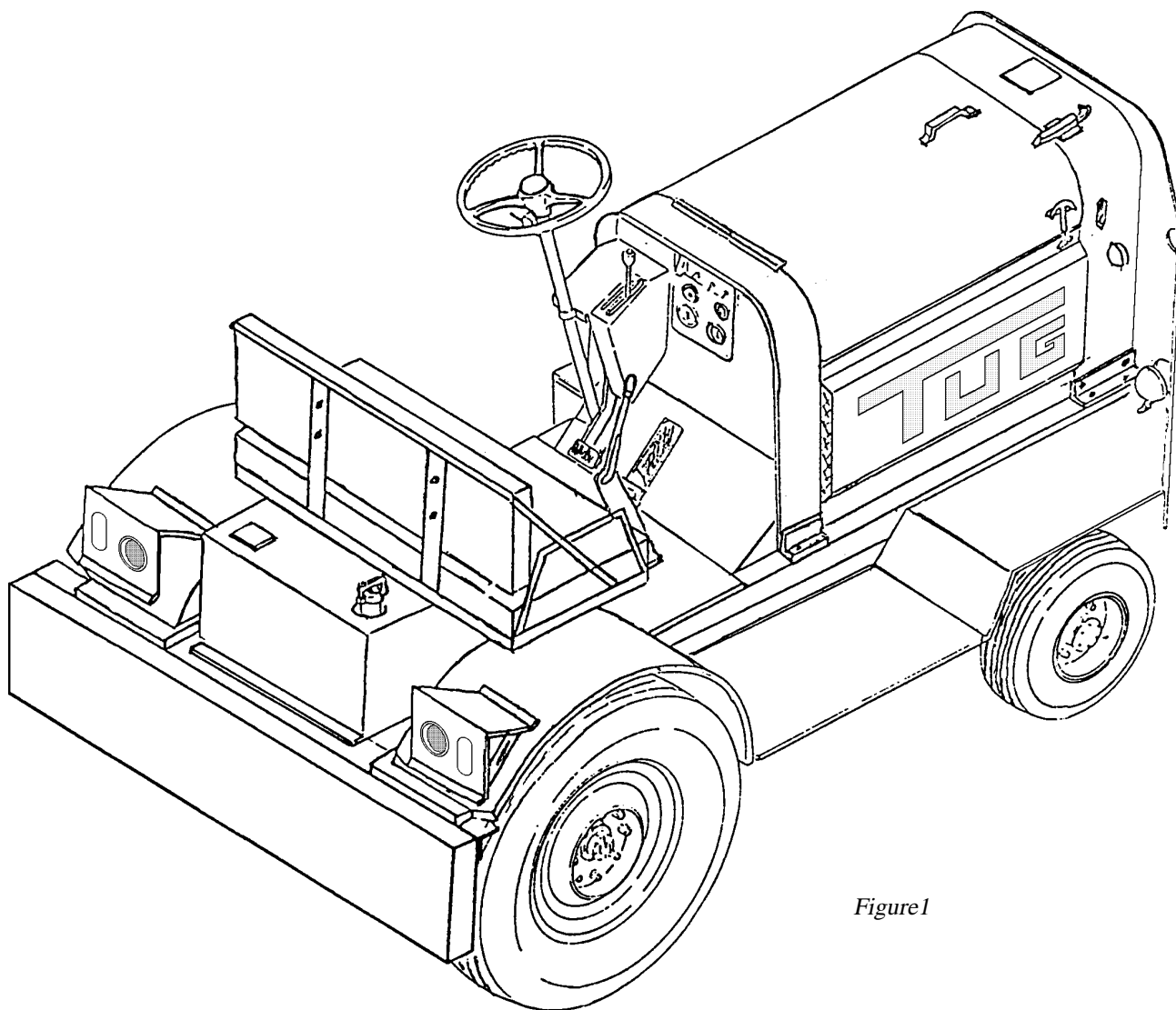
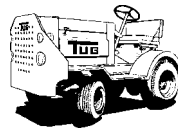


Figure 1

- Heavy Duty Dual Rear Vacuum Power Disc Brake System
- 6-Cylinder Gasoline or 4-Cylinder Diesel Engine
- Automatic Transmission
- 12 Volt Electrical System
- Alternative Towing Brackets



I. DESCRIPTION

B. COMPONENT/SYSTEM

I. Engine and Transmission

The tractor is equipped with an industrial type engine (6-cylinder gasoline or 4-cylinder diesel) with an automatic transmission. The engine will be certified by the manufacturer to meet the emission standards required by Federal law, which are applicable at the date of manufacture. The gasoline engine is designed to operate satisfactorily using regular grade fuel, and the diesel engine operates satisfactorily using Diesel fuel No. 2 and Jet A.

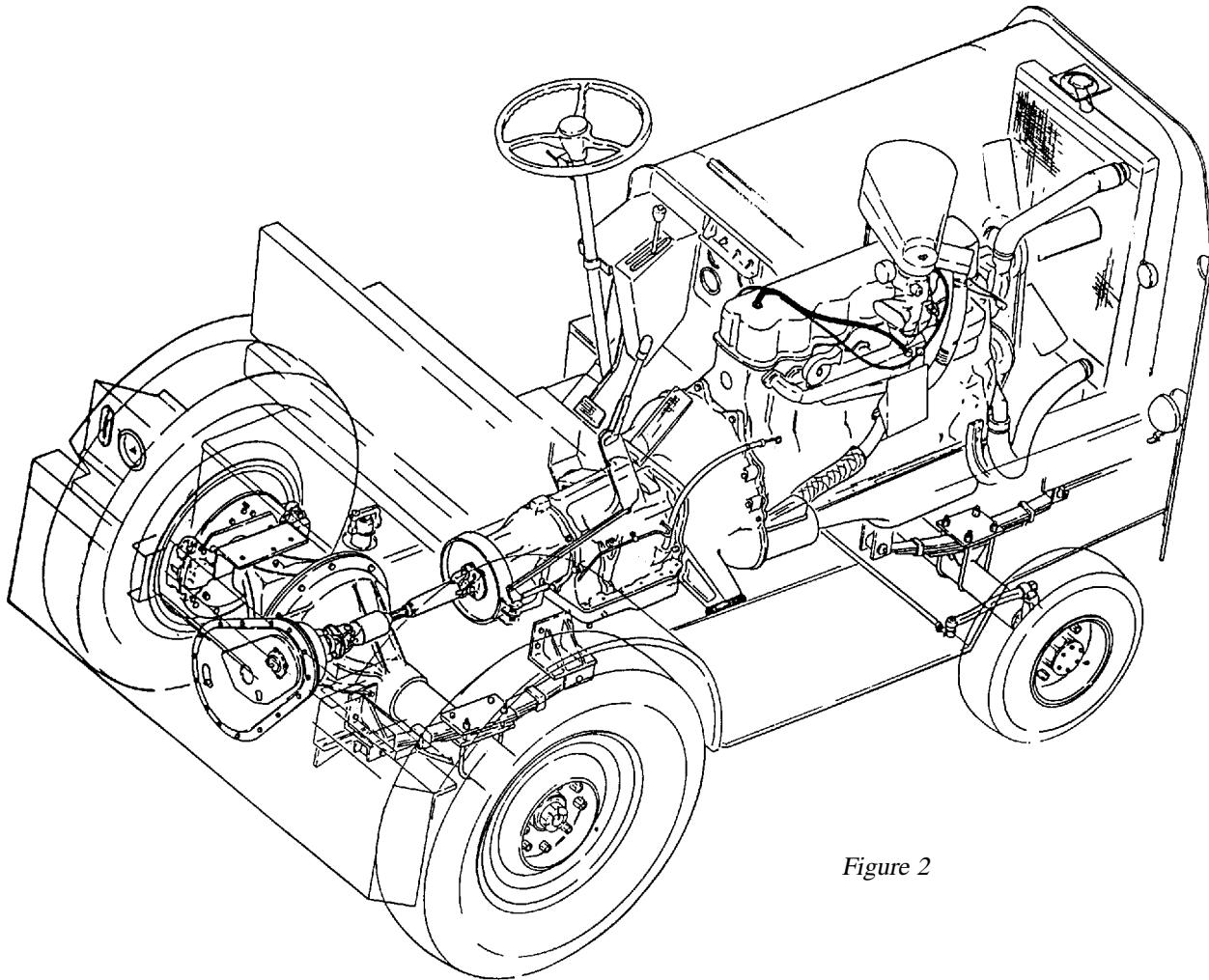
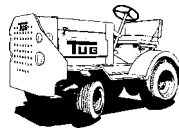


Figure 2



a. Engine

1. Gasoline

The gasoline engine is a heavy duty, industrial type with a short stroke and exhaust valve rotators.

2. Diesel

The diesel engine is a heavy duty, industrial type with four (4) stroke cycle and direct injection.

b. Transmission

The tractor's transmission is a 3-speed transmission with a torque converter.

2. Drive Shaft

The tractor's drive shaft is an automotive type with double universal joints and a sliding spline coupling.

3. Drive Axle

The drive axle assembly, comprising the differential assembly, the reduction gears and the axle shafts is mounted to the chassis by two (2) axial steel mounting pads incorporating four (4) isolator mounts.

4. Steer Axle

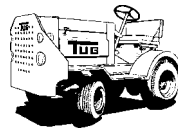
The steering axle is of welded steel tube construction mounted to the chassis by two semi-elliptic, multi-leaf spring assemblies. This is to insure constant ground contact of both wheels over uneven ground.

CAUTION: DESPITE THIS SUSPENSION SYSTEM, IT IS RECOMMENDED THAT THE TRACTOR, WHEN POSSIBLE, IS DRIVEN OVER SMOOTH, EVEN GROUND.

Turning movement from the steering wheel is transmitted to the axle via a steering box and sealed ball jointed linkage. This arrangement provides a high angle of lock with minimum amount of steering effort.

5. Braking System

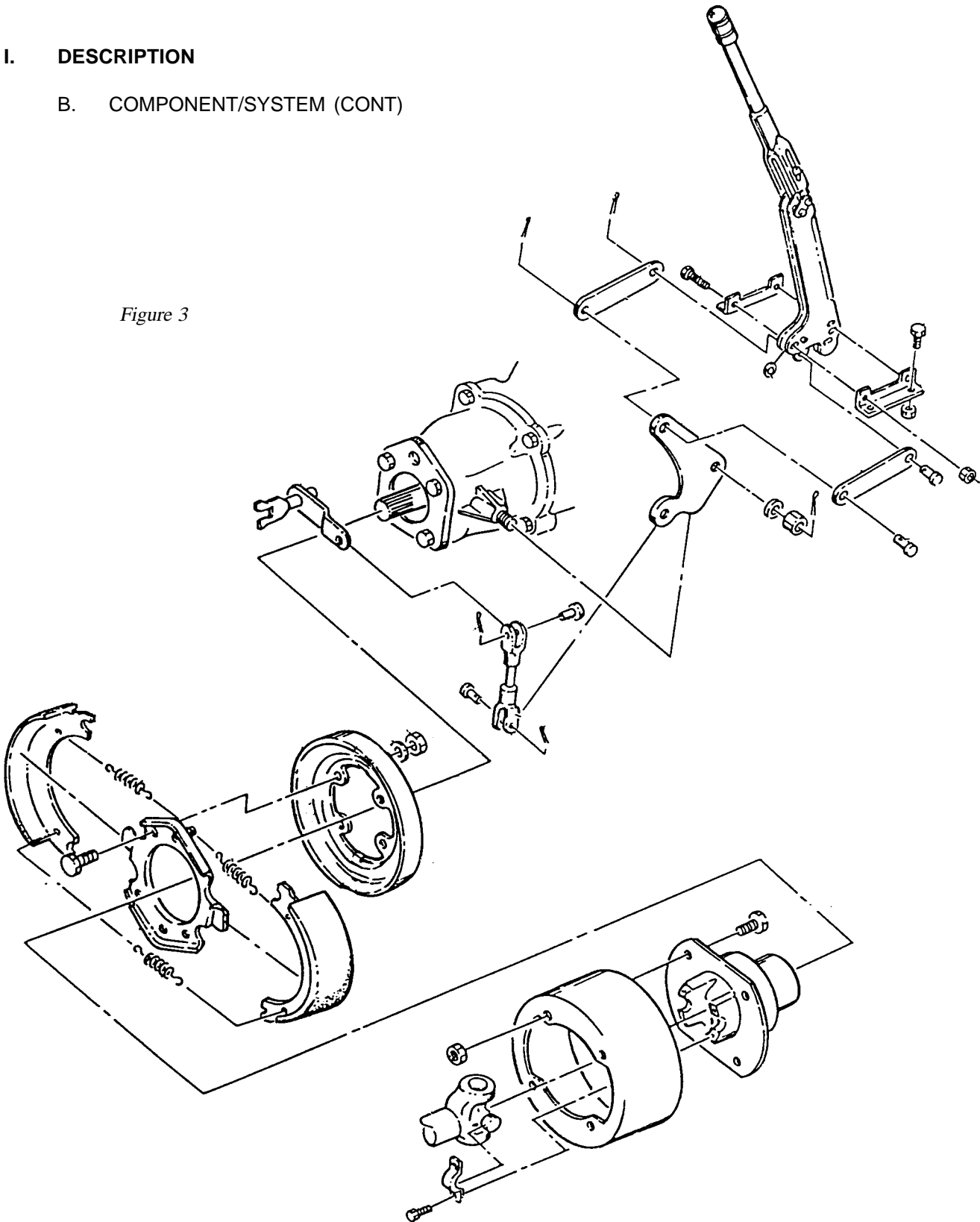
There are two braking systems, mechanical and hydraulic, incorporated into this tractor. The mechanical brake is operated by a strap attached to the hand brake lever and to the parking brake drum attached to the rear of the transmission. (See figure 3) The hydraulic braking system uses a dual-line master cylinder, providing two independent braking systems for the rear axle. The brake warning valve (if equipped) is incorporated into the hydraulic lines to detect leaks in the system.

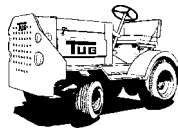


I. DESCRIPTION

B. COMPONENT/SYSTEM (CONT)

Figure 3





6. Wheels

a. Steer Axle

The steer axle utilizes wheels that have 5 bolts on a 5 1/2" bolt circle.

b. Drive Axle

The drive axle employs wheels that have 8 bolts on a 6 1/2" bolt circle.

7. Tires

a. Pneumatic

The tractor's pneumatic tires are 6-ply tubeless on the front and 8-ply tubeless for the rear. The pneumatic tire gives a smooth ride combined with maximum tractive effort. Remember to check the pressure of your pneumatic tires regularly. Uneven tire pressure will not only increase tire wear, but will also decrease traction.

b. Solid Mount

When your tow tractor is working in a application that is detrimental to pneumatic tires (e.g., stones, debris, etc.), it can be fitted with solid rubber tires. While these tires have better wear properties and are not sub subject to puncture failure, they do not run as smoothly as pneumatic tires. When solid tires are fitted, the drawbar rating will vary slightly.

8. Suspension

The steer axle incorporates two semi-elliptic, multi-leaf springs. The drive axle is attached to a pair of solid mounts.

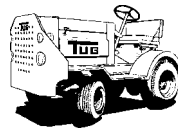
9. Fuel Cell

a. Gasoline or Diesel Fuel

The tractor fuel cell is constructed of stainless steel and is all-seam welded and pressure tested to 6 psi. The fuel cell is equipped with a Protecto-seal filler cap unit. On serials 0024 and up a fuel gauge is installed in the top of the fuel cell. The cell has a fuel capacity of approximately 15.5 U.S. gallons and is encased in an all steel compartment mounted to the aft floor board. Fuel capacity is adequate for eight hours operation without refueling.

b. LP Gas

The liquid propane gas is mainly used for in-plant use. The fuel cells all vary slightly in size, capacity and options, but all mount on the running board to the right of the operator.



I. DESCRIPTION

B. COMPONENT/SYSTEM (CONT)

10. Electrical System

The tractor utilizes a 12-Volt, automotive type, negative ground, electrical system. This system includes a 42 or 60 ampere alternator, a 70 ampere hour battery, voltage regulator, ignition switch, master power switch on tractors 001 through 267, light switch, two headlights, strobe rotating light (optional), turn signals (optional), tail light, horn button and horn, ignition equipment, various gauges and all other circuits.

If tractor is equipped with a cab, the following is added to the above list: Wiper motor, clearance lights, heater blower motor and interior cab light.

11. Frame and Bumper

The chassis frame is a welded assembly fabricated from channeled steel beams. The frame consists essentially of two frame rails, forward and aft cross beams, and a floor plate. The frame rails are fabricated from a 5-inch channel beam. The aft cross-beam is fabricated from a heavy steel plate. For corrosion resistance the entire frame is finished with an oxide primer.

The front bumper plate is constructed of inch thick steel plate attached to the forward crossbeam and the forward edge of the running board. The front bumper plate includes an array of 1-3/4-inch diameter holes for ventilation to the radiator, two 6-inch diameter holes for headlight beam passage and two 4-inch holes for turn signals or reflection. The front bumper plate is detachable by removing all readily accessible bolts, thus permitting direct frontal access to the radiator.

12. Seat

The tractor utilizes a two-passenger, shock mounted seat having a 4-inch thick foam rubber seat cushion and a 2-inch thick foam rubber back cushion. The cushion covers are fabricated from waterproof, heavy gauge vinyl. The seat frame is of all-steel construction and measures approximately 33 inches wide, 17 inches deep, and 16 inches high.

13. Fasteners

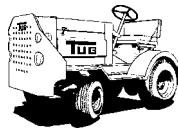
All major structural fasteners are Grade 8, heat treated and use high strength locknuts.

14. Towing Bracket

Alternative towing brackets can be fitted to both the front and rear of the tow tractor.

15. Cab

- (a) The Tug cab, which fully encloses the driving compartment, was designed for and fitted to this tractor cabs have a front and back windshield, and two (2) doors. All



windows consist of safety glass (Lexan side windows optional) on all four sides for maximum visibility. A wiper, powered by a small electric motor, is fitted to the front windshield. The all welded construction of the main cab assembly and the doors are manufactured with the finest of steel. Both of the doors have an inside and outside release, sliding windows, and are removable from the main cab assembly. This type of cab makes the tow tractor ideal for outdoor applications in all kinds of weather.

(b) Economy

The Economy TUG cab is made the same as the full cab except there are no doors, rear window, heater and defroster.

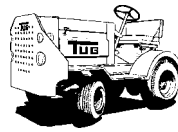
16. Overhead Guard

The all welded construction of the overhead guard utilizes 2 inches by 4 inches by 1/4 inch thick wall rectangular steel tubing. The overhead guard protects the operator and still gives maximum visibility.

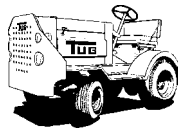
17. Optional Equipment

The following is only a partial list, due to the optional equipment added to "other description":

- Back-Up Lights
- High Water Temp. Shut-Off
- Rubber Bumper, Front
- Turn Signals
- Bucket Seats
- Snow Plow
- Rotating Lights (Red or Amber)
- Low Oil pressure Shut-Off
- ASME LPG Tank
- Brake Warning
- Power Steering



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II. OPERATION

A. CONTROLS, INSTRUMENTS AND SWITCHES

The tractor controls and instruments include; a headlight switch, ignition switch, hour meter, ammeter, water temperature gauge, oil pressure gauge, heater switch (if equipped), wiper control switch (if equipped), dome light (if equipped), automotive type seventeen (17) inch steering wheel, gear shift unit, glow plug button (if equipped), brake pedal, parking brake lever, full-size accelerator pedal, horn button, and a turn signal light lever mounted on the steering column (if equipped).

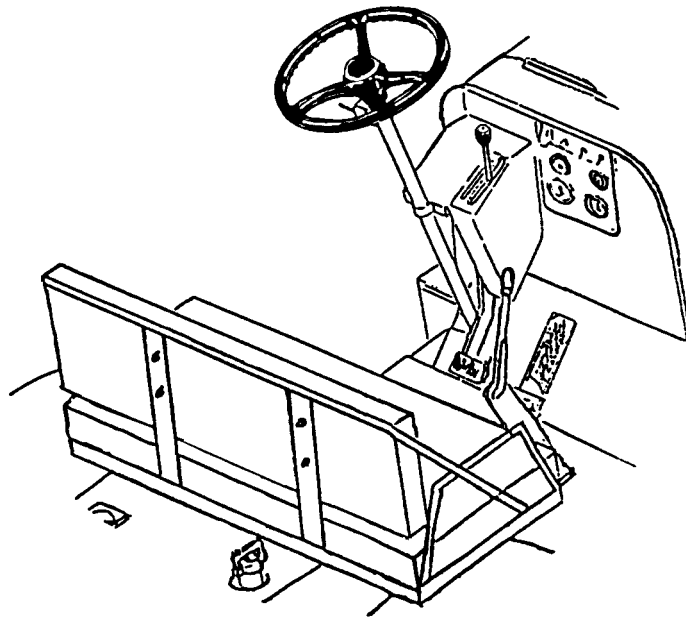


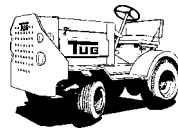
Figure 1

The control layout is designed to combine maximum driving comfort with maximum efficiency. The accompanying illustration (Figure 1) shows the location of the controls, while the following gives a brief summary of their operation. It is essential that the operator become accustomed to both the location and operation of the controls before attempting to drive the tow tractor for productive operation.

1. Shifter Control Unit

The Shifter Control unit is located on the instrument panel immediately in front of the driver's position. The unit has three positions; Forward, Neutral and Reverse.

CAUTION: COME TO A COMPLETE STOP BEFORE SHIFTING FROM FORWARD TO REVERSE OR REVERSE TO FORWARD.



II. OPERATION

A. CONTROLS, INSTRUMENTS AND SWITCHES (CONT)

2. Park Brake Lever

The parking brake lever is connected by a strap to the parking brake drum attached to the rear of the transmission and is used for parking or holding the tractor on grades and should always be set for parking and released before driving. Brake is engaged as lever is pulled toward the operator. Push lever away from operator (down) to release brake.

3. Ignition Switch

An automotive type switch that has four (4) positions.

4. Accelerator Pedal

The pedal is connected to the carburetor (or injection pump a diesel model) via the accelerator cable.

5. Service Brake Pedal

Operates the hydraulic brakes on the rear wheels.

6. Instruments

(a) Hour meter

Reads elapsed time of engine operation.

(b) Dome Light Switch

Operates the interior cab light (if equipped with cab) .

(c) Brake Warning Light

The light operates only if the brake line(s) develop a fluid leak.

(d) Ammeter

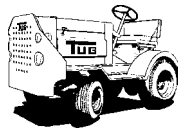
The ammeter indicates the rate of charge or discharge of the alternator/battery circuits.

(e) Oil Pressure Gauge

This gauge reads the engine oil pressure.

(f) Water Temperature Gauge

Measures the temperature of the engine cooling water system.



(g) Headlight Switch

The headlight switch turns the headlights "ON" or "OFF". Toggle in the up position turns the headlights "ON".

(h) Control Switch

Controls the windshield wiper motor (if equipped).

(i) Heater Switch

The heater switch controls the heater blower motor (if equipped).

(j) Glow Plug Button

This button controls the glow plug on the intake manifold and should be held down for approximately 15 seconds prior to cranking (Diesel only).

7. Engine and Transmission

(a) Gasoline

This model uses a Ford Industrial 300 CID Engine with a Ford Industrial C-6 Transmission. The Ford Motor Company takes great pride in the long tradition of quality products and great values that the Ford name represents.

Ford Industrial Engines are tested and inspected before leaving the factory. However, certain checks should be made before putting them into regular operation. Refer to the Initial Start Up requirements in the Maintenance Section (Chapter 2).

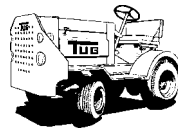
(b) Diesel

This model uses a Perkins Industrial 4.236 or 1000-4 Engine with a Ford Industrial C-6 Transmission. For 50 years Perkins Engines have been a leader in the Engineering and Manufacture of diesel engines. It is the diesel engine that all other engines try to beat in quality, performance and economy of operation.

Perkins Engines are tested and inspected before leaving the factory. However, certain checks should be made before putting them into regular operation. Read the Initial Start Up requirements in the Maintenance Section (Chapter 2).

B. TRAILERS

The most common types of trailers used in the industry today are the conventional 'flat-deck' trailers and the trailers fitted with superstructures. The form of superstructure varies with the trailer's application. These variations include bedstead ends, detachable canvas sides, detachable chains or four permanent sides (one or more of which are usually hinged for loading purposes). Both common types and all variations can be manufactured with either two or four wheel steering.



II. OPERATION

B. TRAILERS (CONT)

A two wheel steer trailer is constructed with its two rear wheels fitted to an axle rigidly mounted to the trailer chassis, and its two front wheels mounted on a turntable or pivoting axle. When the turntable or pivoting axle is directly connected to a drawbar for towing purposes of towing a two wheel steer trailer, extra care must be taken to allow for rear end swing when cornering. A coupling device, which is attached to the rear of the trailer, enables additional trailers to be connected, hence creating a trailer train.

A four wheel steer trailer has both the front and rear axles mounted on turntables. These turntables are interconnected by a tie-bar. The tie-bar runs diagonally from one side of the front turntable to the opposite side of the rear turntable. If the drawbar, which is attached to the front turntable, moves, then the tie-bar arrangement causes the front and rear wheels to turn in opposite directions. Steering stops are placed to prevent the wheels from turning through a full 90 degree lock, which could otherwise cause a load displacement.

C. BRAKING SYSTEMS

1. Overrun Brakes

Trailers which are consistently used to carry heavy loads are usually fitted with overrun brakes. These brakes can be either cable or hydraulically operated. The overrun brakes automatically slow the trailer down when it tends to overrun. In particular, these brakes are recommended when the tow tractor-trailer combination is being operated on gradients.

2. Parking Brakes

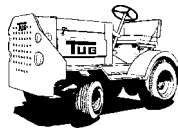
A variety of parking brakes are fitted to trailers. A majority of these brakes are operated when the drawbar is disconnected from the tow tractor and raised vertically. Some other types of brakes include manually operated hand brake levers. If your trailer is not fitted with a parking brake, remember to securely chock the wheels of the trailer before disconnecting the trailer's drawbar from the hitch or the trailer coupling.

D. SAFETY

Safety is the most important aspect of your responsibility.

1. Tips

- (a) Observe floor loading limits with the unladen weight of the tractor.
- (b) Ensure the trailer's load is not wider than the aisles en route.
- (c) Travel at a speed consistent with the road and load conditions.
- (d) Sound the horn and slow down for corners.



- (e) Avoid traveling on soft or bumpy ground when possible.
- (f) Watch out for pedestrians and do not travel too close behind other vehicles.
- (g) Avoid sudden stops.
- (h) Do not block fire fighting equipment from use by parking or depositing a trailer in front of the equipment.
- (i) Report any mechanical or electrical irregularities immediately.
- (j) Ensure road bridge plates are secure and strong enough to withstand the weight of the tractor or the combined weight of the trailer and its load.
- (k) Keep clear of the edge of loading docks.
- (l) When cornering, watch for the trailer's rear end swing.

REMEMBER: A safety minded driver protects both himself, and others, and eliminates unnecessary damage to the tractor and its load.



WARNING: ONLY AUTHORIZED DRIVERS SHOULD BE PERMITTED TO DRIVE.

2. Precautions

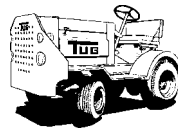
- (a) Upon stopping vehicle place transmission shift lever in neutral, put parking brake ON, and turn ignition switch to OFF position.
- (b) Maximum tow speed of this tractor is 15 m.p.h..
- (c) Only qualified personnel should service this tractor.

E. PROCEDURES

1. Pre-Operation Checklist

The following items must be checked before putting the tractor into service:

- (a) Fuel level.
- (b) Air pressure of the pneumatic tires. Also check tires for cuts, breaks and excessive wear.
- (c) Engine oil level.
- (d) Coolant level in radiator.



II. OPERATION

E. PROCEDURES

1. Pre-Operation Checklist (cont)

- (e) That all controls are in working order.

2. Driving Instructions

- (a) Place shift lever in neutral.
- (b) Make sure parking brake is set.
- (c) ignition switch and engage starter.
- (d) Apply foot brake.
- (e) Release the parking brake.
- (f) Move the transmission shift lever into the required position, i.e., Forward or Reverse.
- (g) Gently press the accelerator pedal, further press the accelerator until the required speed is obtained.

NOTE: Governor limits speed to a maximum of approximately 15 m.p.h..



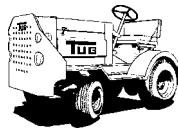
WARNING: MATCH DRIVING SPEEDS TO LOADS BEING TOWED AND WEATHER CONDITIONS. SLOW DOWN WHEN TOWING HEAVY LOADS AND WHEN ROAD SURFACE IS WET OR ICY. USE EXTREME CAUTION WHEN THESE CONDITIONS ARE PRESENT ON GRADES.

- (h) To slow the tractor, release the accelerator pedal and gradually apply pressure to the service foot brake. For an emergency stop, release the accelerator pedal and press hard on the service brake pedal.
- (i) Each time you park, apply the hand brake, turn the ignition switch to the "OFF" position and return the transmission shift lever to neutral.

2. Towing Instructions

SAFE and EFFICIENT towing depends entirely on YOU, the operator. If you are an experienced driver, the following 'rules' will serve to refresh your memory. If you are a trainee, they will assist you to become an expert driver.

- (a) Ensure the trailer load is secure and is within the rated drawbar pull of the tow tractor.
- (b) Ensure the towing coupling is secure.



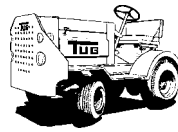
- (c) Start as slowly as possible to allow any 'slack' in towing arrangements to be taken up.
- (d) Travel at a speed consistent with road and load conditions.
- (e) Slow down and sound the horn when approaching corners and junctions.
- (f) Take all corners wide, especially when towing two wheel steer trailers.
- (g) Always be alert. Watch out for pedestrian and never drive too close behind other vehicles.
- (h) Do not carry unauthorized passengers.
- (i) If your trip involves crossing road bridge plates, ensure they are secure and are strong enough to withstand the combined weight of the tractor and driver, or trailer and load.
- (j) When approaching the destination, reduce speed sufficiently far away to ensure a slow, rolling halt. A sudden halt could cause a load displacement.
- (k) Ensure the trailer's parking brake is applied by immediately raising drawbar vertically after disconnecting the trailer coupling. If no parking brake is fitted, securely chock the road wheels before disconnecting coupling.

3. Preventative Maintenance

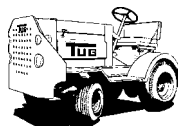
Maintaining the tractor may, or may not be your responsibility, depending on company policy. In either case, maintenance participation, by you (the operator) is advantageous. It will enable you to identify the tractor's components and understand their function so well that you will be able to report immediately on any mechanical irregularities.

CAUTION: DO NOT ATTEMPT TO CARRY OUR REPAIRS. LEAVE THIS TO THE QUALIFIED MAINTENANCE MECHANIC. REPORT A FAULTY TRACTOR AND DO NOT USE UNTIL REPAIRED.

Routine maintenance is essential if your tractor is to be an efficient materials handling unit. Lack of maintenance will result in costly repairs - loss through downtime - and interruptions in plant operation.



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III. SPECIFICATIONS AND CAPABILITIES

A. DIMENSIONS

Length, excluding coupler	102 inches (259 cm)
Width, overall	57 inches (140 cm)
Height, overall, without cab	60 inches (152 cm)
Wheelbase	59 inches (150 cm)
Drive Axle under clearance	5 1/2 inches (014 cm)
Steer Axle under clearance (minimum ground clearance)	7 3/4 inches (020 cm)
Frame under clearance	10 inches (025 cm)
Ramp break-over angle	28°
Angle of approach	35°
Angle of departure	40°
Turning radius	115 inches (292 cm)
Normal operating weight	4500-5450-6200-7500-8400 lbs.
Drawbar pull	3000-4000-5000-6000-7000 lbs.
Maximum gross load (Pull) (Based on a maximum 0% grade)	60K-80K-100K-120K-150K lbs.
Stopping distance:	
15 m.p.h. (5000 dbp Tug & load = 50,000)	113 feet (34.4 m)
10 m.p.h. (5000 dbp Tug & load = 75,000)	51 feet (15.6 m)
5 m.p.h. (5000 dbp Tug & load = 75,000)	feet (2.1 m)

B. ENGINE

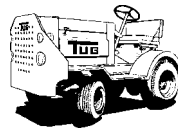
1. Gasoline

(a) Tractors 0001 - 0084

Type Chrysler Slant Six; 225 CID

(b) Tractors 0085 through 0363

Type Ford In-Line, 6-cylinder Overhead Valve
 Fuel Gasoline -Regular: 90 - 94 Octane
 Bore and Stroke 4.00 x 3.18
 Displacement 240 Cubic Inches
 Governed R.P.M.. (Full Load) 2500 RPM
 Net Brake HP at Governed RPM 78
 Torque at 2000 RPM 170 ft/lbs
 Compression Ratio 8.9:1
 Compression Pressure (psi) 150-200
 Oil Capacity 7 qts (dry) - 6 qts (refill)
 Spark Plugs 18 M
 Firing Order 1-5-3-6-2-4
 Idle Speed RPM 500-550
 Manifold vacuum at idle minimum (inches of mercury) 17
 Initial ignition timing-B.T.D.C. 6°
 Oil pressure-hot at 2000 RPM 35 - 60



III. SPECIFICATIONS AND CAPABILITIES

B. ENGINE

1. Gasoline (cont)

(b) Tractors 0362 and up

Type	In-line, 6-Cylinder Overhead Valv
Fuel	Gasoline -Unleaded
Bore and Stroke	4.00 x 3.96
Displacement	300 Cubic Inches
Governed RPM (full load)	2500
Net Brake HP at Governed RPM	95
Torque at 2000 RPM	225
Compression Ratio	7.9:1
Compression Pressure (psi)	150 - 200
Oil Capacity	7 qts (dry) - 6 qts (refill)
Spark Plugs	18 mm
Firing Order	1-5-3-6-2-4
Idle Speed RPM	500-550
Manifold Vacuum at Idle Minimum (inches of Mercury)	17
Initial Ignition Timing-B.T.D.C	6°
Oil Pressure-Hot at 2000 RPM	35 - 60

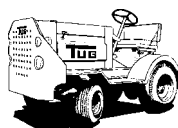
NOTE: See Ford Maintenance and Operators Manual for detailed engine data.

2. Diesel, Perkins 4.236

Type	In-line 4 Cylinder
Fuel	Diesel
Displacement	236
Governed RPM	2500
Net Brake HP at Governed RPN	77
Torque at 2000 RPM	180 foot-pounds
Compression Ratio	16:1

3. Diesel, Perkins 1000-4

Type	In-line 4 Cylinder
Fuel	Diesel
Displacement	243 cubic inches
Governed RPM	2500
Net Brake HP at Governed RPN	80
Torque at 2000 RPM	192 foot-pounds
Compression Ratio	16:1



C. TRANSMISSION

Heavy duty, 3 speed cruisamatic transmission with torque converter.

D. ELECTRICAL SYSTEM

Type 12 Volt, Negative Ground
Alternator 42 or 60 ampere
Battery 70 ampere hour

E. CHASSIS

Main frame, welded construction, all steel.

F. SUSPENSION

Front Axle Semi-elliptical springs mounting directly to frame
Rear Axle Rubber Shock mounting

G. BRAKING SYSTEM

1. Service Brake

Type Hydraulic, Vacuum Assist
No. Of Systems Two (2)
Type Disc
No. of Calipers Four (4)
2. Parking Brake

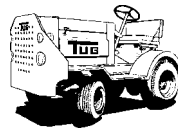
Type Mechanical, Orscheln (adjustable)
lever activating a drum & shoe on
the drive shaft

H. AXLE

Type of drive Rear
Type of axle assembly Rigid Drive
Ratio of drop box 3 to 1
Total ratio 14.142 to 1

I. STEERING SYSTEM

Type of Gearbox Ball and Screw
Type of steer Front
Front axle construction Tubular and forged steel
Front axle, construction Inclined King Pins, Bushings and sealed bearings



III. SPECIFICATIONS AND CAPABILITIES (CONT)

J. TIRES

Front 20.5 x 8 x 10 - 6-ply
Rear 8.00 x 16 1/2 - 8-ply

K. DRIVE SHAFT

Type Automotive with double universal
& sliding spline coupling
Length, universal joint center line
to universal joint center line 11 to 12 1/2 inches (27.9 to 31.7 cm)

L. FUEL SYSTEM

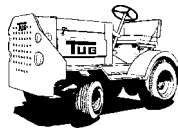
Fuel Cell Capacity 15.5 US Gallons (58.67 Liters)
Fuel Cell Construction Type 304 (or equiv.) Stainless steel, all seam welded

M. COOLING SYSTEM

Capacity 15 quarts
Engine Heavy Duty Radiator and fan
Transmission Fluid Cooling located in engine radiator

N. INSTRUMENTS

Type Electrical
Group Ammeter, Water Temp, Oil Pressure and Hour Meter



IV. SHIPPING

A. PREPARATION

WARNING: HAZARD EXISTS WHEN REFUELING AND DEFUELING THE TRACTOR - NO SMOKING, NO OPEN FLAMES, NO ELECTRICAL DEVICE OPERATIONS.

1. Battery

- (a) Disconnect battery terminals from battery posts.
- (b) Leave battery in battery box.

2. Radiator

Drain engine coolant from radiator and engine block .

3. Fuel Cell (Gasoline and Diesel Only)

- (a) Drain fuel from fuel tank into appropriate container.

NOTE: Drain is located under tractor immediately below tank.

- (b) Disconnect fuel line at lowest readily accessible connection and drain fuel from fuel line.
- (c) Reconnect fuel lines.
- (d) Leave fuel cap on tank, but loosened.

4. Checks

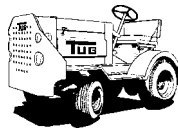
- (a) On tractors so equipped, make certain in-line fuel shut off valve is open.
- (b) Make certain fuel line is connected.
- (c) Make certain shut-off valve on radiator is closed.
- (d) Make certain fuel cell drain valve is closed.

B. PREPARATION FOR OPERATION

WARNING: Make CERTAIN ALL FUEL LINES ARE PROPERLY CONNECTED FROM TANK TO FUEL PUMP TO CARBURETOR (GASOLINE) OR INJECTOR PUMP (DIESEL) .

1. Radiator

- (a) Make certain that radiator shut-off valve is closed.
- (b) Add required amount of coolant/water mixture to radiator



IV. SHIPPING

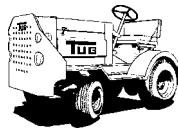
B. PREPARATION FOR OPERATION (CONT)

2. Fuel Cell (Gasoline and Diesel Only)

- (a) Add fuel to fuel tank.
- (b) Check all fuel lines for leaks.

3. Battery

Connect battery terminals to battery posts.



V. STORAGE

A. FOR ONE MONTH

I. Engine

(a) Gasoline

- (1) Run the engine at 1500 RPM and treat the upper cylinder by spraying an engine preservative oil into the carburetor air intake for about two minutes. This oil should be SAE #10, formulated for antirust and anticorrosion protection, along with being a high detergent type that meets requirements for most severs (M.S.) service and also Ford Specification M-2C35. Open throttle for a short burst of speed, then shut off the ignition and allow the engine to come to a stop while continuing to spray the oil into the carburetor air intake.
- (2) Leave the spark plugs installed and cover all engine openings with dust-proof caps or shields.
- (3) Drain oil from crank case.
- (4) Drain water from radiator and engine block.
- (5) Drain fuel from tank, carburetor and fuel lines, (Gasoline only).
- (6) Attach a CAUTION tag on steering wheel stating: Oil and water has been removed from engine.

(b) Diesel

- (1) Run the engine until it reaches normal operating temperature and then shut the engine down.
- (2) Drain oil from crank case and refill with required amount.

CAUTION: OIL WILL BE HOT.

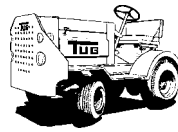
- (3) Drain water from radiator and engine block.
- (4) Attach a CAUTION tag on steering wheel stating: water has been removed from engine.

2. Transmission

No special attention needed.

3. Axle and Reduction Gear Box

No special attention needed.



V. STORAGE

A. FOR ONE MONTH (CONT)

4. Tires

The tractor should be raised and axles chocked to prevent tire contact with ground. The pressure should be reduced to 15 P.S.I.

5. Lubrication

Ensure that all points are lubricated with specified grease, oil, etc.

6. Fluid Levels

All fluid levels should be checked and topped off as necessary.

7. Wheel Bearings

Wheel bearings should be repacked.

8. Battery

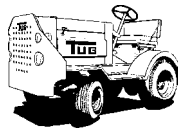
Disconnect battery terminals.

B. INDEFINITE PERIOD

1. Engine

(a) Gasoline

- (1) Run the engine at 1500 RPM and treat the upper cylinder by spraying an engine preservative oil into the carburetor air intake for about two minutes. This oil should be SAE #10, formulated for antirust and anticorrosion protection, along with being a high detergent type that meets requirements for most severs (M.S.) service and also Ford Specification M-2C35. Open throttle for a short burst of speed, then shut off the ignition and allow the engine to come to a stop while continuing to spray the oil into the carburetor air intake.
- (2) Leave the spark plugs installed and cover all engine openings with dust-proof caps or shields.
- (3) Drain oil from crank case.
- (4) Drain water from radiator and engine block.



- (5) Drain fuel from tank, carburetor and fuel lines, (Gasoline only).
- (6) Attach a CAUTION tag on steering wheel stating: Oil and water has been removed from engine.

(b) Diesel

- (1) Run the engine until it reaches normal operating temperature and then shut the engine down.
- (2) Drain oil from crank case and refill with required amount.

CAUTION: OIL WILL BE HOT.

- (3) Drain water from radiator and engine block.
- (4) Attach a CAUTION tag on steering wheel stating: water has been removed from engine.

2. Transmission

- (a) Drain transmission fluid.
- (b) Refill transmission.

NOTE: Prolonged storage may be detrimental to the seals in the transmission.

3. Axle and Reduction Gear Box

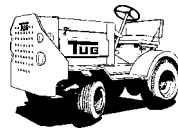
Drain drive axle and reduction gear box by removing drain plug located on the underside of the differential carrier housing. Reinstall plug after draining. The drive axle and reduction gear box are connected internally and share the same oil.

Attach a CAUTION tag on steering wheel stating: Oil has been removed from axle and reduction gear box.

4. Tires

The tractor should be raised and axles chocked to prevent tire contact with the ground. Tire pressure should be reduced to 15 P.S.I., and sprayed with a rubber preservative.

5. Ensure that all points are lubricated with specified grease, oil, etc.



V. STORAGE

B. INDEFINITE PERIOD (CONT)

6. Levels

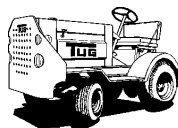
All fluid levels should be checked and topped off as necessary.

7. Wheel Bearings

Wheel bearings should be repacked.

8. Battery

The battery should be removed and stored separately. The battery must be stored in a cool dry place and must not be exposed to direct sunlight. A recommended storeroom temperature of 32 F (0 C) to 90 F (32 C) should be maintained. If the battery is stored in the open, it must be covered for protection against dirt and moisture. A slow charge should be given to the battery every one to two months.

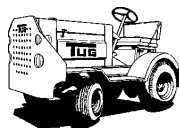


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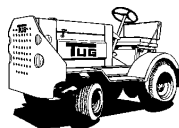
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I. GENERAL

If an overhaul of a component or system is suspected or required, the section or sections that cover the component or system should be read in full and understood completely before attempting any part of an overhaul of a component or system.

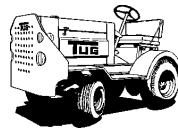
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II . STEERING

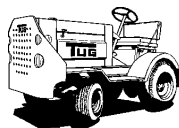
If the tractor has been properly lubricated and maintained and has not experienced damage to the steering system, the steering components will provide many hours of service without an overhaul. Should overhaul be required, or suspected as being required, follow the procedure below:

- A. Jack up the front end of the tractor using normal jacking procedures (i.e., chock rear tires, apply hand brake, and place blocks under tractor front bumper).
- B. Inspect the steering linkage rod for damage. Also check for wear of the linkage rod ball by grasping the rod and shaking it. If the linkage rod ball joints are loose, replace the rod.
- C. Grasp the top and bottom of each tire and shake it in and out to determine any wobble or looseness, while observing the hub and spindle area. If there is any wobble or looseness in the hub, but the spindle is rigid, then the wheel bearings and seals should be adjusted by tightening the hub retainer nut. If excessive noise is experienced after adjustment, the bearings and seals should be replaced as follows:
 - 1. Remove the front wheels by removing the lug nuts on each wheel.
 - 2. Remove the hub plate attachment bolts, the hub plate, gasket, outer hub retainer nut, nut lock, and inner hub retainer nut.
 - 3. Grasp the hub and slide it off the axle shaft.
 - 4. Remove the inner and outer seals and bearings from the hub and wipe the hub interior clean.
 - 5. Inspect hub interior surfaces (bearing races) for scoring. If the races are scored or worn, replace with new races.
 - 6. Install new bearings and seals into the hub, packing the bearings with lithium-base grease, and replace the hub onto the axle shaft.
 - 7. Secure the hub with the retainer nuts and nut lock and replace the hub plate.
 - 8. Install the wheel.
- D. Grasp the top and bottom of the wheel and check for spindle bolt and bushing wear by shaking the wheel in and out while observing the hub and spindle area. If the hub is rigid, but the spindle has play in it at the axle connection, the spindle bolt and bushings should be replaced as follows on each wheel:
 - 1. Remove the front wheels.
 - 2. Disconnect the spindle arm from the axle by removing the cotter pin and retainer nut.
 - 3. Remove the spindle bolt retainer clip, washer, and grease seal.
 - 4. Remove the spindle bolt and lock pin and pull the spindle bolt out the top of the spindle.



II . STEERING (CONT)

5. Replace the two (2) bushings in the spindle bolt holes of the spindle.
 6. Clean and inspect the spindle bearing, replacing the bearing if worn, and repack the bearing.
 7. Position the spindle onto the axle end with the bearing positioned between the lower flange of the spindle and the axle end.
 8. Install spacers between the upper flange of the spindle and the axle until a snug installation is obtained.
 9. Install the new spindle bolt and secure it in place within the axle and using the spindle bolt lock pin.
 10. Install the grease seal, washer, and spindle bolt retainer clip.
 11. Install the spindle arm to the axle with the retainer nut and cotter pin.
 12. Install the wheel.
- E. Grasp the sides of the wheel and shake it from side to side while observing the rod ends. If excessive movement of slack is observed in the rod connection ends, replace the connecting rod ends as follows:
1. Disconnect the rod ends from the spindle arms by removing the cotter pins and retainer nuts.
 2. Remove the connecting rod and remove the rod end retainer clamps.
 3. Screw the new rod ends approximately 1/4-inch into each end of the rod.
 4. Install the connecting rod to the spindle arms, securing the connecting rod ends to the spindle arms with the two (2) retainer nuts and cotter pins.
 5. With the wheels pointing straight forward, adjust the "toe-in" by turning the connecting rod until the tire centerline-to-centerline distance across the back of the tires is 0 inch to 1/8 inch longer than the centerline-to-centerline distance across the front of the tires.
 6. After the toe-in adjustment has been accomplished, install the rod end clamps thus securing the connecting rod adjustment.



III. DRIVE SHAFT UNIVERSAL JOINTS

A. DISASSEMBLY:

1. Remove the drive shaft from the tractor.
2. Place one section of the shaft in a vise being careful not to damage it.
3. Remove the snap rings that retain the bearings.
4. Press the bearing out of the flange by using a universal joint removal tool. If the bearing cannot be pressed all the way out of the flange, remove it with vise grip or channel lock pliers.
5. Reposition the tool to press on the spider to remove the bearing from the opposite side of the flange.
6. Remove the flange from the spider.
7. Remove the bearings and spider from the other end of the drive shaft, following the above procedure.
8. Clean all foreign matter from the flange and yoke of both drive shaft ends.
9. Wash all parts in cleaning fluid. Use of vapor degreaser is permissible in lieu of kerosene or other solvents. Make sure the lubricant passages in the journals for evidence of wear or excessive heat.
10. Soak the needle bearing assemblies in a commercial cleaning fluid to soften particles of hardened grease. Then, wash these parts in cleaning fluid using a stiff brush if necessary to remove all old lubricant. Check each bearing for missing rollers.
11. After the needle bearing assemblies are thoroughly clean, apply clean lubricant to the rollers. Rotate them on the trunnion of the journal to check wear. Fill the journal passages with lubricant and fill the bearings approximately 1/3 full of lubricant before reassembly.

B. ASSEMBLY:

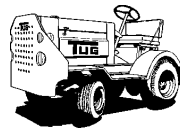
1. Start a new bearing into the yoke at the rear of the drive shaft.
2. Position the spider in the rear yoke and press the bearing below the surface.
3. Remove the tool and install a new snap ring.
4. Start a new bearing into the opposite side of the yoke.
5. Install the tool and press on the bearing until the opposite bearing contacts the snap ring.
6. Remove the tool and install a new snap ring.



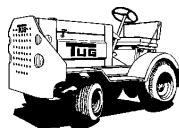
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MA
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TRACTOR

OPERATION AND SERVICE MANUAL



7. Reposition the drive shaft and install a new spider and two new bearings in the front yoke in the same manner as the rear yoke.
8. Position the flange on the spider and install two (2) new bearings and snap rings.
9. Check the joint for freedom of movement. If a bind has resulted from misalignment during the foregoing procedure, tap the ears of the drive shaft sharply to relieve the bind. Do not install the drive shaft unless the universal joints are free of bind.
10. Lubricate the universal joints with long life lithium based grease.



IV. DRIVE AXLE

If the tractor has been properly lubricated, maintained, and operated and has not experienced damage to the drive axle, the drive axle will provide many hours of service without an overhaul. Should overhaul be required, or suspected of being required, follow the procedure below:

A. REDUCTION GEAR BOX

1. Removal:

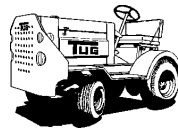
It is not necessary to remove the drive axle from the tractor to conduct disassembly and/or overhaul of the reduction gear case. Disassembly of the reduction gear case is therefore accomplished as follows:

- (a) Disconnect the rear section of the drive shaft from the drive axle input shaft flange by removing the attachment bolts.
- (b) Drain the gear case by removing the gear case oil drain plug located at the bottom portion of the reduction gear case.
- (c) Remove the input shaft flange from the front side of the reduction gear case by removing the input shaft retainer nut and washer.
- (d) Remove the input shaft rear cap and gasket by removing the attachment bolts.
- (e) Remove the large snap ring retaining the input shaft rear bearing in place to the reduction gear case cover.
- (f) Remove the reduction gear case cover by removing the retaining bolts and loosening the cover from the case by tapping the two case positioning pins from the case side.
- (g) Grasp the input shaft from inside the reduction gear case and extract the shaft, together with its bearings (front and rear), from the case housing.
- (h) Remove the reduction gear from the case housing by removing the bevel pinion bearing nut.
- (i) Remove the reduction gear case from the drive axle by cutting the lock wire and removing the gear case retaining nuts and washers.
- (j) Remove the input shaft front cap and gasket from the reduction gear case by removing the attachment bolts.

NOTE: Input shaft front cap and gasket omitted on late serial rear axles.

2. Cleaning:

Clean the front and rear bearings on the input shaft with a suitable solvent such as kerosene. Use of vapor degreaser is permissible in lieu of kerosene or other solvents.



IV. DRIVE AXLE

A. REDUCTION GEAR BOX

2. Cleaning: (cont)

NOTE: Do not clean the bearings with gasoline nor place them in a hot solution tank for cleaning.

3. Inspection:

At this point in the disassembly operation, all parts have been disassembled in the reduction gear case, except for bearings, seals, and the oil filler cap and the oil breather. Inspect all parts as follows:

- (a) Inspect the reduction gear and drive gear for wear or damage. Replace the gears if they are pitted, galled, worn, or broken.
- (b) After cleaning, inspect the bearings and replace the bearings if they are pitted, worn, or damaged in any way. Remove the bearings as required with a puller.

NOTE: Do not use drifts or hammers in removing bearings, as they may easily mutilate or distort component parts.

- (c) Clean and inspect the remaining parts of the reduction gear assembly.
- (d) Replace hexagon nuts with rounded corners with new nuts. Replace all lock washers, oil seals and gaskets with new parts.

NOTE: Use genuine TUG Manufacturing Corporation replacement parts for satisfactory service. For example, making gaskets or foreign material generally leads to mechanical trouble due to variations in the thickness and compressibility of certain materials.

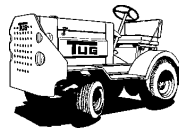
4. Assemble

Assemble the overhauled reduction gear assembly as follows:

- (a) Install new bearings and seals with a suitable press. Coat the bearings with suitable lubricant and coat the seal contacting surfaces with grease.
- (b) Apply a non-hardening sealing compound to the input shaft flange cap contact surface and install the cap to the reduction gear case using the four (4) attachment bolts and new lock washers.

Reduction Gear Case Components:

- (c) Install the reduction gear case to the drive axle using the gear case retaining nuts and washers. Lock-wire the nuts using soft iron wire.



- (d) Install the reduction gear and secure the gear with the bevel pinion bearing nut, nut lock, and bevel pinion bearing locking nut.
- (e) Install the input shaft into the gear case housing.
- (f) Apply a non-hardening sealing compound to the gear case cover contact surface and install the cover, aligning the positioning pins of the cover into their retaining holes on the case. Tap the case cover into the installed position.
- (g) Install the gear case cover attachment bolts and torque to specification.
- (h) Secure the input shaft in the correct position by installing the rear bearing snap ring.
- (i) Install the input shaft rear cap and new gasket using the attachment bolts and new lock washers.

NOTE: Input shaft front cap and gasket omitted on late serial rear axles.

- (j) Install the input shaft flange onto the shaft using the input shaft washer, nut and cotter pin, torquing the nut to specification.
- (k) Assure the gear case oil drain plug is clean and free of any foreign matter and install the plug into the gear case.

Unless other maintenance is to be preformed on the drive axle, fill the reduction gear case with proper lubricant (SAE #140 in summer, #90 in winter).

B. DRIVE AXLE

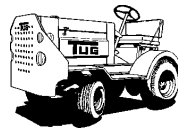
1. Preparations:

NOTE: For overhaul of drive axle it should be removed from tractor.

- (a) Prepare drive axle for disassembly by removing tires, wheels, reduction gear case and removing the oil plug from the bottom of the axle housing to drain out the oil.
- (b) Support axle, on suitable supports on both sides of axle assembly inboard of the wheels and hubs.

2. Remove Axle Shaft:

- (a) Disconnect brake lines from caliper and drain fluid into suitable container. Discard fluid.
- (b) Remove the axle shaft cotter pin, nut and washer from the axle.
- (c) Remove the crossover line, outer brake caliper half, wheel hub and rotor, thereby gaining access to the axle shaft oil seal retainer.



IV. DRIVE AXLE

B. DRIVE AXLE

2. Remove Axle Shaft: (cont)

- (d) Remove the oil seal retainer by removing the bolts lock washers holding it in place. Because of the tight fit of the seal, it may be necessary to use a screwdriver or chisel with small hammer and lightly tap the back edge of the seal at several points around its periphery.

- (e) Remove the bearing retainer, gasket and shims.

NOTE: At this point the axle shaft may be removed from the housing. The amount of force necessary to remove the axle shaft is dependent upon the condition of the axle; therefore, three alternative methods are offered.

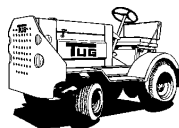
- (f) Wipe the exposed axle shaft free of oil; using both hands, pull the axle shaft, bearings and cups from the housing. If the shaft cannot be removed in this manner, proceed to next step.
- (g) Reinstall axle shaft nut on axle. Using wooden dowel and small hammer, firmly tap against the back side of the axle nut, driving axle shaft from housing.

CAUTION: DO NOT USE SCREWDRIVER OF METAL OBJECTS IN LIEU OF WOODEN DOWEL. METAL OBJECTS WILL DAMAGE THE AXLE AND NUT. DO NOT USE EXTREME FORCE.

- (h) If axle cannot be removed as discussed above, attach axle in conventional manner.
- (i) Inspect axle bearing cage to assure that all components are removed from cage. The axle will come out with the axle as will the outer bearing cup and the bearing pacer collar. The inner bearing cup may be retained in the cage. This should also be removed using a puller or similar device.

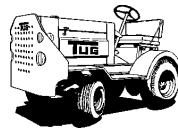
3. Disassemble Axle Housing:

- (a) Place axle assembly in heavy vise or other heavy holding fixture.
- (b) Before disassembling, place length of pipe or suitable support, slightly smaller than axle shaft splines, approximately two-thirds (2/3) through axle from the case side to prevent dropping the differential assembly.
- (c) Remove bolts, nuts and washers from case and cover and remove cover half.
- (d) Remove differential and gear assembly.
- (e) Remove pipe.



-
4. Pinion and Cage Assembly:
 - (a) Remove reduction gear assembly as described above.
 - (b) Remove the bevel pinion bearing washer; the cork oil retainer; the pinion bearing and cup; and the bearing shim.
 - (c) Remove the lockring from inner end of pinion shaft.
 - (d) Using puller or similar device, pull pinion and cage from differential case.
 5. Differential and Gear Assembly:
 - (a) Inspect the differential and gear assembly very carefully prior to disassembly as follows:
 - (1) Mount the carrier in a holding fixture. Wipe the lubricant from the internal working parts and visually inspect them for damage.
 - (2) Rotate the gears to see if there is any roughness which could indicate worn or damaged bearings or chipped gear. Look carefully at the surface of the gear teeth for any scouring, flaking, or signs of abnormal wear.
 - (3) If no obvious misadjustment or damage is noted, inspect the gear contact.
 - (b) If original identification marks are not clear, mark differential case halves with a punch or chisel before disassembling, for correct alignment when reassembling.
 - (c) Cut lock wire, remove cap screws and separate case halves.
 - (d) Remove spider, pinions, side gears and thrust washers.

NOTE: Gear should not be separated from flange unless it is to be replaced.
 - (e) Remove rivets and separate gear and case if required.
 - (1) Carefully center punch rivets in center of head.
 - (2) Use drill 1/32" smaller than body of rivet to drill through head.
 - (3) Press out rivets.
 - (f) Remove differential bearings with bearing puller, if necessary to replace.
 6. Disassemble Pinion and Cage Assembly:
 - (a) Tap pinion out of cage with soft mallet or press shaft from cage.
 - (b) Remove bearings from shaft with suitable puller, if necessary.
-



IV. DRIVE AXLE

B. DRIVE AXLE

7. Clean:

(a) Cleaning Solutions

CAUTION: DO NOT CLEAN THESE PARTS IN A HOT SOLUTION TANK OR WITH WATER AND ALKALINE SOLUTIONS, SUCH AS SODIUM HYDROXIDE, ORTHOSILICATES OR PHOSPHATES. DO NOT STEAM CLEAN ASSEMBLED DRIVE UNITS AFTER THEY HAVE BEEN REMOVED FROM THE HOUSING.

Parts having ground and polished surfaces such as gears, bearings, shafts and collars, should be cleaned in a suitable solvent such as kerosene or diesel fuel oil. Use of vaped degreaser is permissible in lieu of kerosene or other solvent.

(b) Drying

Dry parts thoroughly immediately after cleaning. Use soft, clean, lintless absorbent paper towels or wiping rags. Bearings should never be dried by spinning with compressed air.

8. Inspect:

It is impossible to overstress the importance of careful and thorough inspection of drive unit parts prior to reassembly. Thorough visual inspection for indications of wear or stress, and the replacement of such parts as are necessary will eliminate costly and avoidable drive unit failure. As a general rule, if there is any doubt about the condition of a part, it should be replaced.

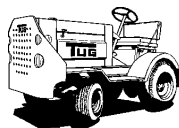
- (a) Inspect all bearings, cups and cones, including those not removed from parts of the drive unit and replace if rollers or cups are pitted or damaged in any way. Remove parts needing replacement with a suitable puller or in a press with sleeves.

CAUTION: AVOID THE USE OF DRIFTS AND HAMMERS. THEY MAY EASILY MUTILATE OR DISTORT COMPONENT PARTS.

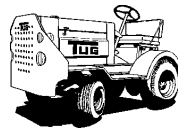
- (b) Inspect first reduction bevel or hypoid and second reduction spur gears for wear or damage. Gears which are pitted, galled or worn or broken through case hardening should be replaced.

- (c) Inspect the differential assembly for the following:

- (1) Pitted, scored or worn thrust surfaces of differential case halves, thrust washers, spider trunnions and differential gear. Thrust washers must be replaced in sets. The use of a combination of old and new washers will result in premature failure.



-
- (2) Wear or damage to the differential pinion and side gear teeth. Always replace the differential pinions and side gears in sets.
 - (d) Inspect spur pinions for wear or damage to teeth.
 - (e) Check end of pinion for indications of brinelling caused by worn splines. Replace the parts if the splines of the pinion and/or thru-shaft are worn, permitting movement of the pinion on the thrushaft.
 - (f) Inspect axle shafts for indications of torsional fractures and runout. Axle shafts should be inspected between centers to ascertain the amount of runout of the ground surfaces. Runout at the shaft flange and splines should not exceed .005 inch total indicator reading.
9. Repair
- (a) Replace all worn or damaged parts. Hex nuts with rounded corners, all lock washers, oil seals and gaskets should be replaced at the time of overhaul.
 - (b) Remove nicks, mars and burrs from machined or ground surfaces. Threads must be clean and free to obtain accurate adjustment and correct torque. A fine mill file or India stone is suitable for this purpose. Studs must be tight prior to reassembling the parts.
10. Assembling Pinion and Cage:
- (a) Press rear thrust bearing onto pinion.
 - (b) Install lockring in slot on pinion behind bearing.
 - (c) Install inner conical bearing and cup on pinion.
 - (d) Slide spacer on pinion then slide on outer bearing.
 - (e) Assemble the pinion shaft and cage.
- CAUTION: FOLLOW TABLE I FOR TORQUING ALL AXLE ASSEMBLY FASTENERS.
11. Assemble Differential and Bevel Gear:
- (a) Rivet bevel gear to case half with new rivets.
 - 1. If a new gear of differential case is to be used in the assembly, the rivet holes in the gear and case should be checked for alignment and line reamed, if necessary. The gear must be tight on the case pilot and riveted flush with the differential case flange. Check with a .002" feeler gauge.
 - 2. Rivets should not be heated, but should be upset cold. When the correct rivet and rivet set is used, the head being formed will be at least 1/8 inch larger in diameter than the rivet hole.
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IV. DRIVE AXLE

B. DRIVE AXLE

11. Assemble Differential and Bevel Gear:

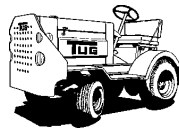
- (a) Rivet bevel gear to case half with new rivets. (cont)
 - 3. The head will then be approximately the same height as the preformed head. The formed head should not exceed 1/16 inch less than the preformed head as excessive pressure will cause distortion of the case holes and result in gear eccentricity.
- (b) Lubricate differential case inner walls and all component parts with axle lubricant.
- (c) Position thrust washer and side gear in bevel gear and case half assembly.
- (d) Place spider with pinions and thrust washers in position.
- (e) Install component side gear and thrust washer.
- (f) Align mating marks, position component case half and draw assembly together with four (4) bolts or cap screws equally spaced.
- (g) Check assembly for free rotation of differential gears and correct, if necessary.
- (h) Install remaining bolts or cap screws, tighten to specified torque and thread with lock wire.
- (i) If bearings are to be replaced, press squarely and firmly on differential case halves.

12. Pinion and Case Assembly:

- (a) Coat cage flange contact surface with non-hardening sealing compound.
- (b) Position cage assembly over studs and tap into position with soft mallet.

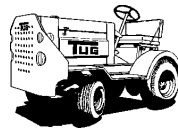
13. Install Differential Assembly:

- (a) Position differential and gear assembly in carrier half.
- (b) Coat carrier flange halves with non-hardening compound.
- (c) Place new differential carrier gasket over flange half and assemble halves using differential carrier bolts, lock washers and nuts. Torque per Table I.
- (d) Install reduction gear case as described in Paragraph (a) .above.



14. Install Axle Shaft:

- (a) Assemble bearings, cups, and bearing spacer collar using press.
- (b) Clean and lubricate hub cavity and carefully fix axle shaft into housing.
- (c) Install shims (total thickness .043-.045), gaskets, bearing retainer and oil seal retainer.
- (d) Install the wheel hub rotor, brake caliper half and crossover line.
- (e) Connect brake lines to calipers.
- (f) Install the axle shaft washer and nut, torquing nut to 400-500 foot-pounds (542-678 N-m).
- (g) Clean magnetic drain plug then install plug in axle housing.
- (h) Fill carrier with 5 1/2 pints (2.6 L) of oil (SAE 90 for winter; SAE 140 for summer).
- (i) Install tires and wheels.
- (j) Install axle in vehicle.
- (k) Jack-up rear of vehicle and operate vehicle at moderate speed for 5 minutes to disperse lubrication.
- (l) Check lubrication.

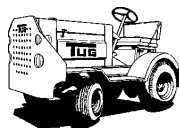


IV. DRIVE AXLE

TABLE I

TORUE SPECIFICATIONS				
LOCATION	DIAMETER	NO. THREADS	TORUE - FT-LB.	
			MIN.	MAX-
Cover to case bolt nuts.	3/8"	16	27	35
	3/8"	24	31	39
	7/16"	20	42	54
	1/2"	20	75	96
Pinion Cage cap screws and stud nuts	3/8"	16	27	35
	3/8"	24	31	39
	7/16"	20	42	54
	9/16"	12	94	120
Differential case nuts and capscrews	3/8"	16	33	43
	1/2"	13	81	104
	1/2"	20	92	118
Pinion Shaft nut	7/8"	20	175	200
	1"	20	300	400
Gear to case cap screws	3/8"	24	38	49

TORQUES GIVEN APPLY TO PARTS COATED WITH MACHINE OIL; FOR DRY (OR "AS RECEIVED") PARTS INCREASE TORQUES 10%; FOR PARTS COATED WITH MULTI-PURPOSE GEAR OIL, DECREASE TORQUES 10% ON STUDS USE SAME TORQUE AS FOR DRIVING STUD.



V. REAR WHEEL DISC BRAKES (SERIAL NO'S 0001 THROUGH 0127)

A. BRAKE SHOES

1. Removal:

- (a) Chock front wheels and jack the rear wheels off the ground.

CAUTION: DO NOT REMOVE THE DRIVE AXLE HUB NUT FOR WHEEL REMOVAL. HUB NUT IS REMOVED ONLY FOR AXLE OR BRAKE REPAIR. SEE FIGURE I.

- (b) Remove the eight (8) lug nuts which secure the wheel to the drive axle hub and remove the wheel.
- (c) Remove the two (2) brake shoe retaining clips by removing the bolts and lock washers which hold them in place.
- (d) Using a pair of pliers, grasp the rear edge of the shoe and slide it out. Repeat for other shoe.

NOTE: It may be necessary to bleed pressure off the system so as to release the shoes. This can be done by loosening the bleeder screw.

2. Installation:

- (a) Slide the new brake shoes into the caliper so that the lining of each shoe is against the rotor and the ears of the shoes resting on the bridge of the caliper.
- (b) Install brake shoe retaining clips.
- (c) Bleed brakes at calipers and add brake fluid to master cylinder, if needed.
- (d) Mount the wheel and lower tractor from jacks.

B. CALIPER AND ROTOR

1. Removal:

- (a) Chock the front tires and jack the rear wheels off the ground.
- (b) Remove the eight (8) lugnuts which secure the wheel to the drive axle hub and remove the wheel.
- (c) Reinstall four (4) lugnuts so as to hold the hub against the rotor.
- (d) Remove the cotter pin from the hub nut and remove the nut and washer.
- (e) Remove the brake shoe retaining clips and remove the brake shoes.

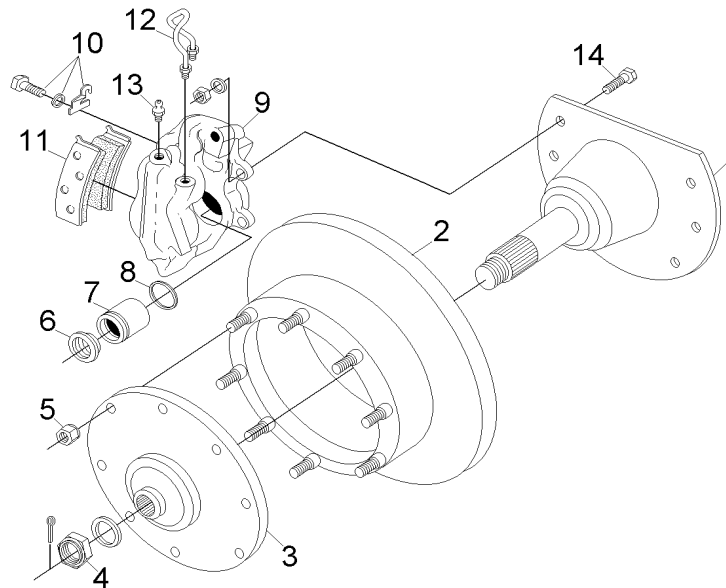
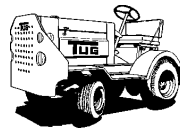


Figure 1.

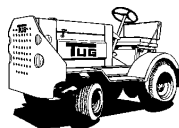
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|----------------------|--------------------|---------------------|
| 1. Axle Flange | 6. Dust Cover | 11. Brake Shoes |
| 2. Rotor | 7. Piston | 12. Cross-over Line |
| 3. Wheel Hub | 8. Seal | 13. Bleeder Screw |
| 4. Axle Nut & Washer | 9. Caliper Assy. | 14. Mounting Bolt |
| 5. Lugnut | 10. Retaining Clip | |

- (f) Disconnect and plug the brake line or let it drain into a suitable container. Discard drained fluid.
- (g) Remove the caliper cross-over line and the bridge bolts which hold the caliper halves together and remove the outer caliper half.
- (h) Slide the wheel hub and rotor off the axle.
- (i) Remove the cotter pins, nuts, and bolts which secure the remaining caliper half to the axle housing and remove the caliper.

NOTE: In removing the caliper mounting bolts and nuts, it is important to turn the nut, not the bolt.

2. Caliper Disassembly:

- (a) Remove the bleeder screw. Figure 1.
- (b) Peel dust boots out and away from piston grooves and caliper housing.



- (c) Slowly pull pistons from caliper housing.
- (d) Using sharpened wooden or soft plastic dowel, remove seal from groove inside bore.

CAUTION: DO NOT SCRATCH, BURR OR OTHERWISE DAMAGE OUTSIDE OF PISTON OR INTERIOR OF BORE.

3. Caliper Cleaning:

WARNING: NO SMOKING, FIRE OR OPEN FLAME IS PERMITTED IN AREAS WHERE ALCOHOL IS BEING USED. AVOID INHALATION OF FUMES.

- (a) Clean all parts with alcohol.
- (b) Use air hose to blow-out all fluid passages.
- (c) Use lint-free cloth to dry.
- (d) Repeat above steps until all components are thoroughly cleaned.

4. Caliper Inspection:

- (a) Inspect interior of calipers for evidence of cracks or leakage.
- (b) Closely inspect lugs and bolts for evidence of cracks or excessive corrosion. If cracked or excessively corroded, replace with new parts.

WARNING: REPLACE CALIPERS AND BOLTS ONLY WITH SAME PARTS NO'S AS ORIGINAL.

- (c) Inspect piston and bores for burrs, scratches or evidence of wear.

NOTE: (1) A black stain on a piston or in a bore was probably caused by the boots or seals and should not be considered as cause for replacement.

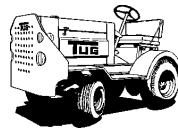
(2) Slight scratches on the interior of the bore can be tolerated. No scratches on the piston exterior surface can be permitted.

- (d) Discard all old seals and dust boots.

5. Caliper Assembly:

- (a) Use vise to hold caliper halves as an assembly aid.
- (b) Wet seal in brake fluid and position in bore. By sliding finger around interior of bore, press seal into groove.

CAUTION: BE SURE SEALS ARE NOT TWISTED OR ROLLED.



V. REAR WHEEL DISC BRAKES (SERIAL NO'S 0001 THROUGH 0127)

B. CALIPER AND ROTOR

5. Caliper Assembly (cont)

- (c) Wet dust boot with brake fluid and install it in groove around upper edge of bore.
- (d) Coat outside surface of piston with brake fluid.
- (e) Stretch dust boot around piston and slowly slide piston into bore until groove along top of piston is approximately even with top of dust boot.

CAUTION: USE FIRM EVEN PRESSURE TO SLOWLY FORCE PISTON INTO BORE. ABRUPT FORCES MAY CAUSE PISTON TO COCK SIDEWAYS OR DAMAGE SEAL.

- (f) Fit upper rim of dust boot into groove in piston.
- (g) Press piston by hand into bore as far as it will go without pinching boot.
- (h) Loosely install bleeder screw.

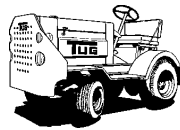
6. Installation:

WARNING: REPLACE BOLTS AND NUTS ONLY WITH ORIGINAL PART NUMBERS.

- (a) Attach caliper half (lugged) to axle housing flange with bolt, nut, and washer with washer against caliper.

NOTE: Turning nut only, torque to 30-40 foot-pounds (40-54 N-m), then install cotter pin with "loop" of pin upward.

- (b) Secure wheel hub to rotor using four (4) lugnuts and slide rotor and hub onto axle.
- (c) Attach remaining caliper half to mounted half using bridge bolts with lockwashers and torque 70-80 foot-pounds (95-108.5 N-m).
- (d) Install and tighten fluid crossover line.
- (e) Slide brake shoes into place with shoe linings facing each other and ears of shoes resting on caliper bridge.
- (f) Install brake shoe retaining clips.
- (g) Install axle nut and washer. Torque nut to 400-500 foot-pounds (542-678 N-m). Install cotter pin.
- (h) Reconnect brake fluid lines.
- (i) Add fluid to master cylinder, if needed.



- (j) Bleed brakes at calipers to assure system is full of fluid and free of air. Add fluid as needed.
- (k) Remove lugnuts from studs.
- (l) Mount the wheel.
- (m) Lower vehicle from jacks.

7. Check-out:

- (a) Check brake pedal for sponginess or hard pedal.
- (b) Drive tractor slowly and make several slow speed stops.
- (c) Check all brake fluid line fittings and caliper areas for fluid leakage.
- (d) Correct any discrepancies before returning tractor to normal service.

C. ROTOR:

1. Removal:

Remove rotor as described in Section B.1 above.

2. Disassembly:

Remove lug nuts thereby separating rotor from hub.

3. Cleaning:

**WARNING: NO SMOKING, FIRE OR OPEN FLAME IS PERMITTED
IN AREAS WHERE ALCOHOL IS BEING USED. AVOID INHALATION OF FUMES.**

- (a) Clean rotor with alcohol.
- (b) Use lint-free cloth to dry.

4. Inspection:

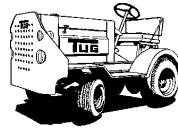
- (a) Inspect weldments for evidence of corrosion or cracking. Replace if cracked or severely corroded.
- (b) Inspect rubbing surfaces for evidence of corrosion, pitting or scratches. Replace if scratched, corroded or pitted.



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OPERATION AND SERVICE MANUAL



V. REAR WHEEL DISC BRAKES (SERIAL NO'S 0001 THROUGH 0127)

C. ROTOR (CONT)

NOTE: All rotors having a plate thickness of less than .450 should be scrapped. All others should be returned to TUG for testing and re-surfacing. No on-site resurfacing should be attempted.

5. Assembly:

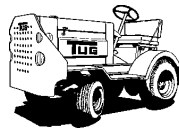
Using four (4) lug nuts, fasten hub and rotor together.

6. Installation:

Install rotor as described in Section B. 6 above.

7. Check-out:

Conduct check-out as described in Section B. 7 above.



VI . REAR WHEEL DISC BRAKES (SERIAL NO'S 0128 AND UP)

A. SHOE AND LINING REPLACEMENT

Inspect the brake linings any time that the wheels are removed. Check both ends of the outboard shoe by looking in at each end of the caliper. These are the points at which the highest rate of wear normally occurs. However, at the same time, check the lining thickness on the inboard shoe to make sure that it has not worn prematurely. Look down through the inspection hole in the top of the caliper to view the inboard shoe. Whenever the thickness of any lining is worn to the approximate thickness of the metal shoe, all shoe and lining assemblies on the axle set should be replaced.

1. Removal:

- (a) Remove two thirds (2/3) of the total brake fluid from the master cylinder reservoir. This step is taken to avoid reservoir overflow when the caliper piston is pushed back into its bore. Discard the brake fluid removed. Never reuse brake fluid.
- (b) Chock front wheels.
- (c) Raise the tractor and remove the rear wheels.
- (d) Push the piston back into its bore. This can be accomplished by using a "C" clamp.
- (e) Remove the two (2) mounting bolts which attach the caliper to the support bracket. Lift the caliper off the rotor and position on the drive axle so that the brake hose (Delco) or steel brake line (Kelsey-Hayes) will not support the weight of the caliper.

NOTE: It is not necessary to remove brake hose (Delco), but may be necessary to remove steel brake line (Kelsey-Hayes) when relining disc brakes.

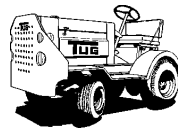
2. Removing Shoe and Linings, Sleeves and Bushings:

(a) Delco Caliper

- (1) Remove the inboard shoe and support spring from piston. Dislodge the outboard shoe and remove from caliper.
- (2) Remove the two sleeves from the inboard ears of the caliper and discard. Remove the four rubber bushings from the grooves in each of the calipers ears and discard.

(b) Kelsey-Hayes Caliper

- (1) Slide inboard shoe and lining assembly out of the caliper support. Slide outboard shoe and lining assembly out of caliper.
- (2) Remove outer bushings from calipers by pressing out of bore using a suitable tool. Discard bushings.



VI . REAR WHEEL DISC BRAKES (SERIAL NO'S 0128 AND UP)

A. SHOE AND LINING REPLACEMENT

2. Removing shoe and linings. sleeves and bushings:

(b) Kelsey-Hayes Caliper (cont)

- (3) Slide inner bushings (flanged) off guide pins and discard. Remove positioner from guide and discard.**

3. Cleaning and Inspection:

- (a) Examine piston area for fluid leaks by looking for excessive moisture around boot area. Check dust boot for cuts, cracks or other damage which would affect its ability to seal piston bore. If leaks are present or boot shows damage, caliper should be overhauled. See specific Section.**
- (b) If no defects are found, wipe clean the inside of the caliper including four ears where bushings are installed. Wipe the outside surface of the dust boot clear of all dirt so that when piston is pressed to bottom of bore, boot will fold back without coming out of groove.**

CAUTION: DO NOT USE COMPRESSED AIR TO CLEAN THE INSIDE OF THE CALIPER SINCE THIS MAY CAUSE THE DUST BOOT TO BECOME UNSEATED.

- (c) Examine both sides of the rotor for scoring or rough finish. In normal use, a slight ridge of rust may form on the edge of the disc. This ridge may be removed with sandpaper. If additional rotor servicing is required, see specific Section.**

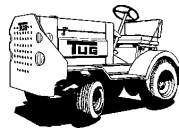
4. Installing Shoe and Lining, Sleeves and Bushings:

(a) Delco Caliper

- (1) Delco Silicone Lube No. 179-651, lubricate new sleeves, new rubber bushings, and bushing grooves. Install rubber bushings in all four caliper ears.**

CAUTION: IT IS ESSENTIAL THAT THE NEW SLEEVES AND RUBBER BUSHINGS WHICH ARE INCLUDED IN EACH DELCO SHOE AND LINING KIT BE USED AND THAT LUBRICATION INSTRUCTIONS BE FOLLOWED IN ORDER TO INSURE PROPER FUNCTIONING OF THE SLIDING CALIPER DESIGN.

- (2) Use Delco Tool, J-22835, to install the sleeve. Position the sleeves so that the end toward the shoe and lining assembly is flush with the machined surface of the ear.**
- (3) Before installing inboard shoe, secure inboard shoe support spring, flat notch type.**



- (4) Position the inboard shoe and lining in the caliper and push down until the shoe lays flat against the piston.

NOTE: On inboard shoe and lining assemblies with wear sensor, there is a specific left hand and right hand shoe. When installed properly, the wear sensor will be toward rear of tractor.

- (5) Position the outboard shoe in the caliper with the ears at the top of the shoe over the caliper ears and the tab at the bottom of the shoe engaged in the caliper cut-out.

(b) Kelsey-Hayes Caliper

NOTE: When installing new shoe and lining assemblies, it will be necessary to also install new positioners, inner bushings and outer bushings.

- (1) Slowly and carefully push piston back into bore, if required.
- (2) Install new inner guide pin bushings in caliper with flanged end on inboard side.
- (3) Compress flanges of outboard bushing in fingers and work into position in hole from outboard side of caliper.
- (4) Slide new shoe and lining assemblies into position in caliper support and caliper being sure that metal portion of shoe is fully in recess of caliper and caliper support.

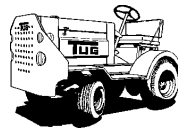
5. Installing Caliper Assembly:

(a) Delco Caliper

- (1) Position caliper over rotor and line up holes in caliper ears with holes in the mounting bracket. Make sure the brake hose is not twisted or kinked. Wipe all dirt and corrosion from the caliper mounting bolts and lubricate both ends of bolts with Delco Silicone Lube No. 179-651.

CAUTION: DO NOT USE ABRASIVES ON THE BOLTS SINCE THIS MAY DAMAGE THE PLATING. IF THE BOLTS ARE DAMAGED OR CORRODED, THEY SHOULD BE REPLACED.

- (2) Start the bolts through the sleeves in the inboard caliper ears and mounting bracket, making sure that the ends of the bolts pass under the retaining ears on the inboard shoe. Push the bolts through to engage the bushings in the outboard caliper ears, at the same time threading the bolts into the mounting bracket. Tighten the bolts.
- (3) Pump the brake pedal to seat the linings against the rotors.



VI . REAR WHEEL DISC BRAKES (SERIAL NO'S 0128 AND UP)

A. SHOE AND LINING REPLACEMENT

5. Installing Caliper Assembly:

(a) Delco Caliper (cont)

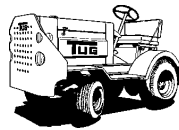
- (4) Using a large pair of channel-lock pliers, clinch the outboard shoe by locating pliers on top of upper ear. Be sure to clinch both ends of the shoe.

NOTE: After clinching, there should be no radial clearance between the shoe and caliper housing. If radial clearance exists, repeat clinching procedure.

- (5) Install rear wheels and tighten lugnuts to one hundred (100) foot-pounds (135 N-m).
- (6) Add fresh hydraulic brake fluid to the master cylinder to bring the level up to within 1/8" of the top. Before moving the vehicle, pump the brake pedal several times to make sure it is firm. Do not move vehicle until a firm pedal is obtained (bleeding may be necessary). Check master cylinder level again after pumping the brake pedal.
- (7) Check-Out:
 - (a) Check brake pedal for sponginess or hard pedal.
 - (b) Drive tractor slowly and make several slow speed stops.
 - (c) Check all brake fluid line fittings and caliper areas for fluid leakage.
 - (d) Correct any discrepancies before returning tractor to normal service.

(b) Kelsey-Hayes Caliper

- (1) Holding inboard shoe and lining assembly in position, carefully slide caliper down into position in support bracket and over rotor. Align guide pin holes of support bracket, inboard and outboard shoes.
- (2) Install new positioners over guide pins with open ends toward outside.
- (3) Install assembled guide pins from inboard side through bushing, caliper, support bracket, inboard and outboard shoes and into outer bushings in caliper.
- (4) Press IN on end of guide pins and thread.
- (5) Check-Out
 - (a) Check brake pedal for sponginess or hard pedal.



- (b) Drive tractor slowly and make several slow speed stops.
- (c) Check all brake fluid line fittings and caliper areas for fluid leakage.
- (d) Correct any discrepancies before returning tractor to normal service.

B. CALIPER OVERHAUL

1. Delco Caliper

(a) Removal:

- (1) Removal of the caliper for overhaul is the same as for shoe and lining replacement except that it will be necessary to disconnect the brake hose.
- (2) First, disconnect the hose from the steel brake line and cap the fittings to prevent dirt from entering the line or the hose. Remove the caliper, with bore attached, to a work bench for overhaul.

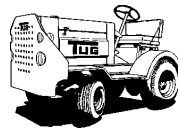
(b) Disassembly:

- (1) Before beginning disassembly, thoroughly clean the exterior of the caliper using clean denatured alcohol. Place the caliper on a clean work surface.
- (2) Remove the brake hose from the caliper, discarding the copper gasket. Check the hose for worn spots, cracks or other signs of deterioration. Discard the hose, if damaged, to be replaced with a new hose at reassembly. Drain brake fluid from the caliper.
- (3) Use clean shop towels to pad the interior of the caliper and remove the piston by directing compressed air into the caliper inlet hole.

NOTE: Use just enough air pressure to ease the piston out of the bore. If the piston is blown out, even with padding provided, it may become damaged.

CAUTION: DO NOT PLACE THE FINGERS IN FRONT OF THE PISTON IN AN ATTEMPT TO CATCH OR PROTECT IT WHEN APPLYING COMPRESSED AIR. THIS COULD RESULT IN SERIOUS INJURY.

- (4) Use a screwdriver to pry the boot out of the caliper. Extend the screwdriver across the caliper bore, under the boot, and pry up. Be careful not to scratch the caliper bore.
- (5) Use a piece of wood or plastic, a plastic toothpick is ideal, to remove the piston seal from its groove in the caliper bore. DO NOT USE A METAL TOOL OF ANY TYPE FOR THIS OPERATION.
- (6) Remove the bleeder valve from the caliper.



VI . REAR WHEEL DISC BRAKES (SERIAL NO'S 0128 AND UP)

B. CALIPER OVERHAUL

1. Delco Caliper (cont)

(c) Cleaning and Inspection:

- (1) The boot, piston seal, rubber bushings and sleeves are to be replaced each time the caliper is overhauled. Discard, do not bother to clean and inspect, these parts.
- (2) Clean all other parts in clean brake fluid or denatured alcohol. Use dry, filtered compressed air to dry parts and blow out all passages in the caliper and bleeder valve.

CAUTION: USE OF LUBRICATED SHOP AIR WILL LEAVE A FILM OF MINERAL OIL ON THE METAL PARTS. THIS MAY DAMAGE RUBBER PARTS WHEN THEY COME IN CONTACT AFTER REASSEMBLY.

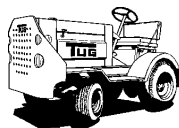
- (3) Check the mounting bolts for corrosion, breaks in the plating or other damage . Do not use abrasives in an attempt to clean the bolts - replace them.
- (4) Carefully examine the piston OD for scoring, nicks, corrosion and worn or damaged chrome plating. If any surface defects are detected, replace the piston.

CAUTION: PISTON OD IS THE PRIMARY SEALING SURFACE IN THE CALIPER ASSEMBLY. IT IS MANUFACTURED AND PLATED TO CLOSE TOLERANCE. REFINISHING BY ANY MEANS OR THE USE OF ANY ABRASIVE IN THE FIELD IS NOT ACCEPTABLE.

- (5) Check the caliper bore for the same defects as the piston with the exception of plating damage. The piston bore is not plated and stains or major corrosion can be polished with crocus cloth. Do not use emery cloth or any other form of abrasive. Thoroughly clean the caliper after the use of crocus cloth. If the bore cannot be cleaned up in this manner, replace the caliper.

(d) Reassembly:

- (1) Lubricate the caliper bore and the new piston seal with clean brake fluid. Position the seal in the caliper bore groove. Lubricate the piston with clean brake fluid and assemble a new boot into the piston groove so that the fold faces the open end of the piston. Insert the piston into the caliper bore, using care not to unseat the seal, and force down to the bottom in the bore. This will require a force of 50 to 100 pounds. Position the OD of the boot in the caliper counterbore and seat with Tool No. J-22904.
- (2) Check the boot installation to make sure that the retaining ring molded into the



boot is not bent and that the boot is installed fully below the caliper face and evenly all around. Otherwise dirt or moisture may enter the bore and cause damage or corrosion.

- (3) Install the brake hose in the caliper inlet using a new copper gasket.

(e) Installation:

Installation of the caliper and mounting parts (rubber bushings, sleeves, shoe and lining assemblies, and bolts) is the same as for lining replacement except for the following:

- (1) The brake hose must be connected to the steel brake line.
- (2) After overhaul or any time that the brake hose or line is disconnected, the calipers must be bled. Use either the manual or pressure tank method.

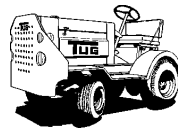
(f) Check Out:

- (1) Check brake pedal for sponginess or hard pedal.
- (2) Drive tractor slowly and make slow speed stops.
- (3) Check all brake fluid line fittings and caliper areas for fluid leakage.
- (4) Correct any discrepancies before returning tractor to normal service.

2. Kelsey-Hayes Caliper

(a) Removal:

- (1) Remove about two-thirds (2/3) of the total brake fluid capacity from the master cylinder reservoir which serves the disc brakes. Do not drain the reservoirs completely.
- (2) With vehicle raised evenly on a hoist or jack-stands, remove the rear wheels.
- (3) Locate brake line and wipe area around fitting at brake with a clean cloth to remove excess dirt and grease.
- (4) Disconnect steel brake line from caliper. Plug brake line to prevent loss of fluid.
- (5) Remove the caliper from the vehicle in the same manner as specified for shoe and lining replacement.
- (6) Remove the shoe and lining assemblies and the rubber bushings in the same manner as specified for shoe and lining replacement.



VI . REAR WHEEL DISC BRAKES (SERIAL NO'S 0128 AND UP)

B. CALIPER OVERHAUL

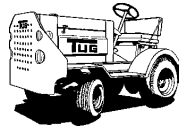
2. Kelsey-Hayes Caliper

(b) Disassembly:

- (1) Prepare a clean bench area.
- (2) Open bleed screw and drain brake fluid from caliper assembly.
- (3) Mount caliper assembly in a vise equipped with padded jaws. (Caution: Excessive vise pressure will cause bore distortion and binding of piston.)
- (4) Remove piston from cylinder bore using compressed air. Use extreme care to avoid damage to piston or bore. Allow dust boot to remain in caliper groove as piston is withdrawn.
- (5) Remove caliper from vise and remove dust boot.
- (6) Using a small, pointed, wooden or plastic stick, work piston seal out of its groove in piston bore. Discard old seal. Do not use a screw-driver or other metal tool for this operation, because of possibility of scratching piston bore or burring edges of seal groove.
- (7) Remove bleeder screw.

(c) Cleaning and Inspection:

- (1) Clean all parts with brake fluid and wipe dry, using a clean, lint free cloth. Using an air hose, blow out the drilled passages and bores.
 - (2) Inspect cylinder bore for scoring, pitting or corrosion. A corroded or deeply scored caliper should be replaced; however, light scores and stains may be removed.
 - (3) Polish any discolored or stained area with crocus cloth. Use finger pressure rotating the crocus cloth in the cylinder bore; do not slide the cloth in and out of the bore under pressure. Do not use any other form of abrasive or abrasive cloth. Black stains on the bore walls are caused by the piston seals and will do no harm.
 - (4) Check each piston to see if it is pitted, scored or worn. If any of these conditions exist, discard and replace the piston.
 - (5) Check the clearance of the piston in the bore, using a feeler gauge. Clearance should be .002" to .006". If clearance exceeds this specification, replace the caliper assembly.
-

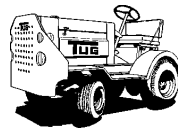


(d) Reassembly:

- (1) Dip new piston seal in clean brake fluid and install in groove in bore. Seal should be positioned at one area in groove and gently worked around the groove, using clean fingers, until properly seated. NEVER USE AN OLD PISTON SEAL. (Be sure seal is not twisted or rolled.)
- (2) Coat new piston boot with clean brake fluid. Install in caliper by working into outer groove, using fingers only. (Boot will seem larger than diameter of groove, but will snap into place when properly positioned in groove.) Using forefinger, slide around inside of boot to be sure it is seated, or correctly installed.
- (3) Plug high pressure inlet to caliper and bleeder screw hole, then coat piston with a generous amount of lubricant (as specified above) . With fingers spreading boot, work piston into boot and press down on piston. (The entrapped air below piston will force boot around piston and into groove as piston is depressed.) Remove plug, then carefully push piston down the bore until bottomed. CAUTION: Force must be applied uniformly to avoid cocking.
- (4) Install new bushings, see specific section.
- (5) Install bleeder screw.

(e) Installation:

- (1) Examine shoe and lining assemblies for wear damage, or fluid contamination. If condition is found satisfactory they may be reused. If not, install new shoe and linings in both brake systems. If old linings are reused, be sure they are installed in their original positions.
- (2) Install inboard and outboard shoe and lining assemblies in support and caliper.
- (3) Remove plug from brake line and install into caliper. Tighten securely.
- (4) Be sure that bleeder screw is open, then reconnect the brake line at the caliper housing. Bleed the system (see specific section). Allow the caliper to fill with brake fluid. After all air bubbles have escaped, and fluid runs clear from bleeder, close the bleeder screw. Replenish the brake fluid in the master cylinder.
- (5) "Pump" the brake pedal several times to actuate the piston seals and position the shoe and lining assemblies.
- (6) Check for fluid leakage at all connections under maximum pedal pressures. Refill master cylinder reservoir as necessary.
- (7) Install rear wheels and tighten lugnuts to one hundred (100) foot-pounds (135 N-m).



VI . REAR WHEEL DISC BRAKES (SERIAL NO'S 0128 AND UP)

B. CALIPER OVERHAUL

2. Kelsey-Hayes Caliper

(e) Installation:

- (8) Remove jackstands.
- (9) Road test the vehicle and make several slow speed stops to wear off any foreign material on the brakes and to seat the shoes. The tractor may pull to one side on the first application after service. This is normal until shoes are seated.

(f) Check Out:

- (1) Check brake pedal for sponginess or hard pedal.
- (2) Drive tractor slowly and make several slow speed stops.
- (3) Check all brake fluid line fittings and caliper areas for fluid leakage.
- (4) Correct any discrepancies before returning tractor to normal service.

C. ROTOR

1. Renewal:

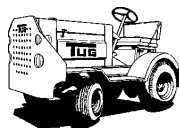
- (a) Chock the front tires and jack the rear wheels off the ground.
- (b) Remove the lugnuts which secure the wheel to the drive axle hub and remove the wheel.
- (c) Reinstall lugnuts so as to hold the hub against the rotor.
- (d) Remove the cotter pin from the hub nut and remove the nut and washer.
- (e) Remove caliper assemblies. See specific section.
- (f) Slide the wheel hub and rotor off the axle

2. Disassembly:

Remove lugnuts thereby separating rotor from hub.

3. Cleaning:

WARNING: NO SMOKING, FIRE OR OPEN FLAME IS PERMITTED IN AREAS WHERE ALCOHOL IS BEING USED. AVOID INHALATION OF FUMES.

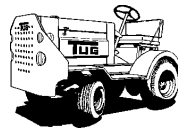


- (a) Clean rotor with alcohol.
 - (b) Use lint-free cloth to dry.
4. Inspection:
- (a) Inspect weldments for evidence of corrosion or cracking. Replace if cracked or severely corroded.
 - (b) Inspect rubbing surfaces for evidence of corrosion, pitted or scratches. Replace if scratched, corroded or pitted.
 - (c) Check the thickness and out of plane limits of the rotor. The minimum limit should be .885 inches.
5. Reassembly:
- Using lug nuts, fasten hub and rotor together.
6. Installation:
- (a) Slide the wheel hub and rotor onto the axle.
 - (b) Replace caliper assemblies. See specific section.
 - (c) Replace axle nut and washer and replace cotter pin.
 - (d) Replace wheel and secure with lugnuts.
 - (e) Lower rear wheels to the ground and unchock front wheels.
7. Check-Out
- (a) Check brake pedal for sponginess or hard pedal.
 - (b) Drive tractor slowly and make several slow speed stops.
 - (c) Check all brake fluid line fittings and caliper areas for fluid leakage.
 - (d) Correct any discrepancies before returning tractor to normal service.

D. BLEEDING THE DISC BRAKE SYSTEM

1. General:

- (a) If the caliper was removed for overhaul, or if the brake hose or steel line was disconnected for any reason, it will be necessary to bleed all air from the calipers and connecting lines.



VI . REAR WHEEL DISC BRAKES (SERIAL NO'S 0128 AND UP)

D. BLEEDING THE DISC BRAKE SYSTEM

1. General: (cont)

- (b) Prior to bleeding the system, it is important to check the master cylinder reservoir. Use hydraulic fluid, DOT 3, Extra Heavy Duty Brake Fluid to bring the level up to within one-eighth (1/8) inch of the top.
- (c) Brakes can be bled either manually or with pressure bleeding equipment.

CAUTION: FLUID WHICH IS DRAINED, FLUSHED OR BLED OUT OF A TRACTOR'S BRAKE SYSTEM SHOULD BE DISCARDED. IT IS NOT SAFE FOR REUSE FOR ANY PURPOSE.

2. Manual Bleeding:

- (a) Manual bleeding requires two men - one to pump the brake pedal and another to operate the bleeder valves. Make sure that the master cylinder is full. After the bleeder valve is opened, depress the brake pedal one full stroke, close bleeder valve, then allow the pedal to return slowly to the released position. Allowing the pedal to return too quickly may draw air into the system. Continue operating the pedal in this manner until one cylinder or caliper is bled. Refill the master cylinder and go on to the next cylinder or caliper.

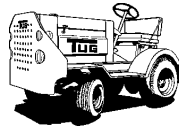
CAUTION: IN ORDER TO INSURE THAT NO AIR CAN BE SUCKED BACK INTO THE SYSTEM, THE BLEEDER VALVE MUST BE CLOSED AT THE END OF EACH STROKE, BEFORE THE BRAKE PEDAL IS RELEASED.

- (b) Since it is desirable to bleed the longest line first, the normal sequence for manual bleeding at the wheels is: Right Aft, Left Aft, Right Forward and Left Forward.
- (c) Check the fluid level in the reservoir frequently during the bleeding procedure.

3. Pressure Bleeding:

- (a) If the equipment is available, the pressure tank method of bleeding is faster, since the master cylinder does not have to be refilled several times. Pressure bleeding equipment must be of the diaphragm type. That is, it must have a rubber diaphragm between the air supply and the brake fluid to prevent air, moisture, oil and other contaminants from entering the hydraulic system. Install the special bleeding adapter to the master cylinder. Make sure that the pressure tank is at least 1/3 full of fluid. Position the tank so that its hose will easily reach the adapter on master cylinder of the vehicle being serviced, then make the air pressure connection to tank (20 to 25 psi) . Open the tank valve to bleed all air out of the hose before connecting it to the adapter. After making this connection, open the valve when ready to begin bleeding.

CAUTION: DO NOT LIFT, MOVE OR SHAKE THE TANK AFTER AIR PRESSURE IS APPLIED. THIS MAY CAUSE AIR TO BECOME TRAPPED IN THE FLUID.



- (b) Bleed both rear calipers, then, bleed both front calipers. This provides the most effective means for expelling all air from the brake system when pressure bleeding.

NOTE: The pressure bleeding process may be speeded up by lightly tapping the brake pedal when the bleeder valve is opened. This creates pulsations that tend to purge air from the system.

4. Check-Out:

- (a) Check brake pedal for sponginess or hard pedal.
- (b) Drive tractor slowly and make several slow speed stops.
- (c) Check all brake fluid line fittings and caliper areas for fluid leakage.
- (d) Correct any discrepancies before returning tractor to normal service.

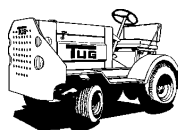
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CHAPTER 4

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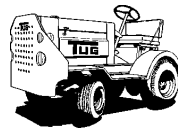


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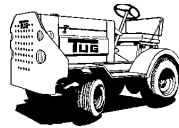
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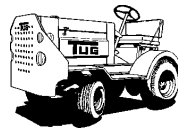
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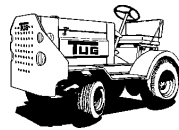
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I. Description

A. INTRODUCTION

The Illustrated Parts List contained herein furnishes spare parts and replacement parts information and provides general part and assembly information necessary for maintenance of the Tug Manufacturing Corporation Model MA Tow Tractor.

B. USING THE ILLUSTRATED PARTS LIST (IPL)

The Illustrated Parts List provides an illustrated break-down of components and systems which comprise the tractor. It consists of numerous figures with corresponding parts lists. The IPL is arranged in such a manner that each list is on a right hand page, with the corresponding illustration on the facing left hand page.

1. Figure and Index Number

The figure and index number indicates the figure number (found on the facing page) and the item number which identifies each line item shown on that figure. (See illustration below).

Fig & Ind #	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
15-8			T6-4018-113	Battery Stand	1	"
15-9			660-1-1309	Battery Cable, Black, Group 24/27/4D Battery	1	As Req'd
			T6-7016-121	Battery Cable, Black, Group 31 Battery	1	"
15			T6-7016-115	Battery Cable, Red, Group 24/27/4D Battery, Left Hand Mounted	1	"

Refers to the figure number and the item's number on that figure.

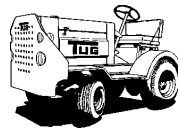
Figure and Index Number blank: This item is one of multiple items designated by a single Figure and Index Number. The first item in such a group is assigned a number; the rest of these items are listed directly below. These items are generally similar in function, but have different applicabilities or effectivities.

No Index Number: This item is related to the components or system in the illustration, but is not actually shown. In certain cases, such items are shown in other figures in section 4-2.

2. Part Numbers and Vendor Codes

Parts are identified by part numbers assigned by Tug Manufacturing Corporation or, in the case of fasteners etc., by industry standard identification. When applicable, vendors' part numbers are also included and the individual vendor for each item is identified.

Vendor codes are provided for quick, easy reference to an individual vendor. The vendor can be identified by referring to the Vendor Codes Reference List in this section.



I. Description

B. USING THE ILLUSTRATED PARTS LIST (IPL)

2. Part Numbers and Vendor Codes (cont.)

Vendor codes are not in any way related to the part number. They should not be used when ordering replacement parts. They are for use as a reference only when using this manual.

See the illustration below for further explanation of part numbers.

Fig & Ind #	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
			T6-7010-321	Instrument Panel, With Fuel Gauge	1	"
10-23	GW	22092	T6-1300-197-33	Switch, Snow Plow, 4-Way, (Lift/Angle), Note 1	1	"
	GW	15680		Harness, Single Lever, (4-Way Switch), Note 1	1	"
	GW	21919	T6-1300-197-31	Lift Switch, Snow Plow, Note 1	1	"
	GW	21918	T6-1300-197-32	Angle Switch, Snow Plow, Note 1	1	"
10-24			1/4-20NCX3/4	Hex Head Bolt	2	"

No vendor code or vendor part number indicates that the part is designed, manufactured or modified by Tug Manufacturing Corp.

Industry standard identification.

Part number assigned by Tug Manufacturing Corp.

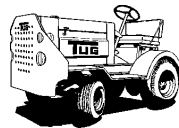
No Tug part number indicates that Tug Manufacturing Corp. has not assigned a part number to the part and that the part is inventoried and supplied under the vendor part number.

3. Description and Quantity

A description and quantity is provided for each part listed in the IPL. The quantity given for subassemblies and sub-parts is the number of subassemblies/parts contained in the component depicted in the associated illustration, not necessarily the complete tractor.

4. Effectivity

The effectivity of each item is given in part or in whole in the "Effective" column of the IPL. Information concerning the effectivity of a particular part may also be found in the description column, the figure title, or in notes located at the bottom of the IPL page. Effectivity is usually (but not always) associated with the serial number. See the following examples for further explanation of effectivity information.



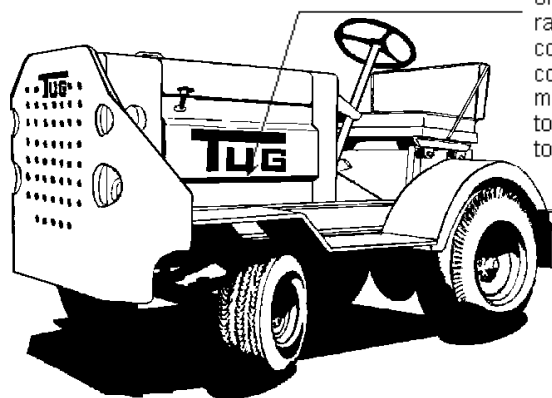
Description	Qty	Effective
Radiator, Gasoline Engine	1	001-240
Radiator, Gasoline Engine	1	241-296
Radiator, Diesel Engine	1	Note 1
Radiator With Fan Shroud, Gasoline Engine	1	Note 2
Radiator Cap	1	001 & Up

Serial number range used in conjunction with in the description. (Gasoline Engine).

Serial number range can also be used in conjunction with the figure title.

Refers to a note which is located at the bottom of the page, directly below the parts list.

Serial number range.



The serial number is stamped on the top of the left frame rail, just outside of the engine compartment, as is the model code and the date of manufacture. It is not necessary to open the engine compartment to locate the serial number.

Indicates that the part is applicable to tractors equipped with certain systems or components.

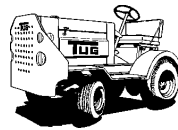
Fig & Ind #	Code	Vendor Part Number	Tug Part Number	Description	Qty	Effective
13-1	HA	4042R	T6-7006-101A	Tail/Stop Light Kit, Plastic	Ref.	As Req'd
	BE	M413-3	T6-7006-101	Tail/Stop Light Assembly, Steel Frame (Note 1)	Ref.	"
	HA	414-15C	X6021-101	Lens, Backup Light, Steel Frame (Note 3)	2	"

Effectivity clarified in a note. (In this case the applicability of one part is associated with that of another).

3. Back-up light lens X6021 is used with steel frame tail/stop light assembly T6-7006-101 to provide steel frame back-up light.

ENGINE AND ENGINE MOUNT INSTALLATION,
CUMMINS/ONAN DIESEL ENGINE

Effectivity given in figure title



I. Description

C. ORDERING SPARE PARTS

To ensure that proper spares and replacement parts are obtained, it is recommended that all major components be procured directly from Tug Manufacturing Corporation. Use of parts and vcomponents not manufactured or supplied by Tug Manufacturing may void the warranty. When replacing structural fasteners which are listed by industry standard identification only, use Grade 8 or higher material.

Spare parts can be ordered directly from TUG Manufacturing Corporation by calling TUG SHOP at 1-800-989-8499 (toll free in Canada and U.S.) or (U.S.A.) 404-422-7233 (outside United States and Canada). Ask for TUG SHOP when calling. FAX messages can be sent to (U.S.A.) 404-422-8730.

When ordering spare parts, please be prepared with Tug part numbers (vendor part number and code if no Tug part number is assigned), part description, figure and index number and revision date of IPL page (located at the lower right hand corner of the page, below the page number).

TUG SHOP business hours are from 8:00 AM until 5:00 PM eastern time, Monday through Friday. Answering machines are ready to receive calls after regular business hours. All calls received after hours will be returned during the next regular business day.

D. VENDOR CODES REFERENCE LIST

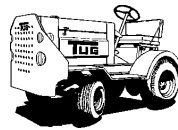
Vendor	Name	Address	City	Prov/ST
005	AEROFAB, INC.	1154 NW 20TH STREET	POMPANO BEACH	FL
006	AEROFAST, INC.	360 GUNDERSEN DRIVE	CAROL STREAM	IL
008	AIR & HYDRAULICS ENG.	P.O. BOX 360108	BIRMINGHAM	AL
012	ARISTON, INC.	P.O. BOX 751377	CHARLOTTE	NC
013	BAIRSTOW DISTRUBUTING	1785 ELLSWORTH IND. DRIVE	ATLANTA	GA
015	ATLANTA RUBBER DIST. INC.	DIV. OF ATLANTA FLUID POWER	ATLANTA	GA
016	ATLANTIC SOUTHERN PRODUCTS	3 DUNWOODY PARK, SUITE 118	ATLANTA	GA
017	ATTWOOD CORPORATION	P.O. BOX A	LOWELL	MI
018	AUTO COLOR COMPANY, INC.	419 GLOVER STREET	MARIETTA	GA
021	B&J HYDRAULICS COMPANY	1661 OLD HWY. 41	MARIETTA	GA
022	BN AUTO PARTS COMPANY	25 KEENE STREET	KENNESAW	GA
024	BEARINGS AND DRIVES, INC.	P.O. BOX 4325	MACON	GA
026	WALKER MANUFACTURING	P.O. BOX 98738	CHICAGO	IL
027	ALLIED AUTOMOTIVE	P.O. BOX 67-174	DETROIT	MI
033	JOHN S. BARNES CORP.	P.O. BOX 3001	CAROL STREAM	IL
035	BROAD SALES INC.	P.O. BOX 81	ONEONTA	AL
037	HH BRUNNER ENGINEERING	P.O. BOX 1367	BEDFORD	IN

<u>Vendor</u>	<u>Name</u>	<u>Address</u>	<u>City</u>	<u>Prov/ST</u>
038	CAIN TOOL & EQUIPMENT INC	411 NORTH TENNESSEE STREET	CARTERSVILLE	GA
040	SPW INDUSTRIES	1880 JOY LAKE RD.	LAKE CITY	GA
043	WESTERN WIRE ROPE & FITG.	P.O. BOX 222	BESSEMER	AL
046	HAYGOOD OF ATLANTA, INC.	P.O. BOX 198663	ATLANTA	GA
047	CLARK-HURTH COMPONENTS	P.O. BOX 751136	CHARLOTTE	NC
050	BENDIX ALLIED SIGNAL	P.O. BOX 92230	CHICAGO	IL
051	CROSS COMPANY	306 JJ DRIVE	GREENSBORO	NC
052	CURTIS INSTRUMENTS, INC.	200 KISCO AVE.	MT. KISCO	NY
056	DEL CITY WIRE CO., INC.	P.O. BOX 95609	OKLAHOMA CITY	OK
059	DIAMOND RUBBER PRODUCTS	P.O. BOX 531164	BIRMINGHAM	AL
060	TITAN DISTRIBUTION, INC.	P.O. BOX 71338	CHICAGO	IL
062	APPLIED INDUSTRIAL TECH	P.O. BOX 6339-T	CLEVELAND	OH
067	THERMAL DYNAMICS CORP.	P.O. BOX 40000	HARTFORD	CT
070	FURON COMPANY	FELSTED DIVISION	CHICAGO	IL
071	ELECTRICAL INS. SUPPLIER	P.O. BOX 98059	CHICAGO	IL
072	MCNAUGHTON-MCKAY ELECTRIC	P.O. BOX 65821	CHARLOTTE	NC
074	UNITED TECHNOLOGIES AUTO	P.O. BOX 71436	CHICAGO	IL
079	FULLWELL MOTOR PRODUCTS	P.O. BOX 94787	CLEVELAND	OH
080	BRANHAM-MINGIS IND. PDTS.	SECTION #792	LOUISVILLE	KY
082	GENERAL ELECTRIC COMPANY	GE ED & C	ATLANTA	GA
083	GENERAL ELECTRIC COMPANY	CUSTOMER FINANCIAL SERVICES	ATLANTA	GA
085	GENERAL RUBBER	P.O. BOX 44005	ATLANTA	GA
087	PETERSON SPRING	DIVISION NO. 4	DETROIT	MI
088	GEORGIA STEEL SUPPLY CO.	P.O. BOX 93786	ATLANTA	GA
089	CHANDLER PRODUCTS INC.	P.O. BOX 91792	CHICAGO	IL
093	GOODYEAR TIRE & RUBBER	REFERENCE #56-0012515	CHARLOTTE	NC
094	GORDY TIRE	9015 HOWELL MILL ROAD	ATLANTA	GA
096	A.L. HANSEN MFG. CO.	DEPT. 31HING ROAD	LIBERTYVILLE	IL
100	HELLA INCORPORATED	201 KELLY DRIVE	PEACHTREE CITY	GA
103	COOPER TIRE & RUBBER CO.	P.O. BOX 91689	CHICAGO	IL
104	THE PIERCE COMPANY	P.O. BOX 7700	INDIANAPOLIS	IN
105	HOLLAND ATLANTIC HITCH CO	P.O. BOX 347	DENMARK	SC
108	T.D. WHEEL CO. OF VA.,INC	P.O. BOX 95010	CHICAGO	IL
110	INDUSTRIAL ENGINE & EQUIP	P.O. BOX 75526	CHARLOTTE	NC
111	INDUSTRIAL ENGINE & EQUIP	P.O. BOX 81286	ATLANTA	GA
114	INSUL-TAB, INC.	P.O. BOX 526	WOBURN	MA
115	VESCOR CORPORATION	50 N. RIVER STREET	SOUTH ELGIN	IL
118	K-D LAMP COMPANY	1910 ELM STREET	CINCINNATI	OH



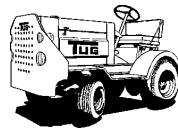
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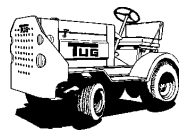


Vendor	Name	Address	City	Prov/ST
120	PAWLING CORPORATION	P.O. BOX 11135A	NEW YORK	NY
121	INGRAPHICS, INC.	10927 CRABAPPLE ROAD	ROSWELL	GA
127	MARIETTA PARTS WAREHOUSE	P.O. BOX 612	MARIETTA	GA
128	MARK C. POPE ASSOCIATES	P.O. BOX 1517	SMYRNA	GA
130	MARMON/KEYSTONE CORP.	FILE #96657	ATLANTA	GA
135	RICHMOND'S MUFFLER & AUTO	1339 JOE FRANK HARRIS PK	CARTERSVILLE	GA
136	MEYER PRODUCTS	P.O. BOX 371561M	PITTSBURGH	PA
137	MICHELEN TIRE CORPORATION	P.O. BOX 100860	ATLANTA	GA
138	MIDWEST CONTROL PRODUCTS	P.O. BOX 299	BUSHNELL	IL
140	MORSE INTERNATIONAL	MORSE CONTROLS DIVISION	ATLANTA	GA
141	MOTION INDUSTRIES, INC.	P.O. BOX 43965	ATLANTA	GA
143	MOULDEN SUPPLY COMPANY	P.O. BOX 1247	JACKSON	MI
146	NEWARK ELECTRONICS	P.O. BOX 94151	PALATINE	IL
148	NOLAND COMPANY	P.O. BOX 1169	MARIETTA	GA
152	ORSHELN COMPANY	P.O. BOX 410294	KANSAS CITY	MO
153	PAUL MOORE COMPANY	77 CIRCLE FREEWAY DRIVE	CINCINNATI	OH
155	PETERSON MANUFACTURING CO	P.O. BOX 410032	KANSAS CITY	MO
156	PHILLIPS TEMRO, INC.	DEPT. 77423	DETROIT	MI
158	POLLAK ENGINEERED	PRODUCTS GROUP	CLEVELAND	OH
159	POTTER & BRUMFIELD	P.O. BOX 99157	CHICAGO	IL
160	PROTECTOSEAL COMPANY	P.O. BOX 95588	CHICAGO	IL
162	QUADRASTAT CORPORATION	P.O. BOX 30269	LOS ANGELES	CA
164	REID TOOL SUPPLY COMPANY	P.O. BOX 179	MUSKEGON	MI
171	ROCKWELL INTERNATIONAL-FL	NBD BANK TECH CENTER	BELLEVILLE	MI
172	ROCKWELL INTERNATIONAL-NC	LOCKBOX 77654	DETROIT	MI
173	ROCKWELL INTERNATIONAL-NC	LOCKBOX 77654	DETROIT	MI
175	TRW ROSS GREAR DIVISION	P.O. BOX 98912	CHICAGO	IL
177	JOSEPH T. RYERSON & SON	P.O. BOX 751763	CHARLOTTE	NC
179	KROSS, INC.	25371 RYE CANNON ROAD	VALENCIA	CA
180	SAGINAW DIVISION	GENERAL MOTORS CORPORATION	DETROIT	MI
181	METALPHOTO OF CINCINNATI	P.O. BOX 73833-N	CINCINNATI	OH
182	UTA ENG. SYSTEM DIVISION	P.O. BOX 71436	CHICAGO	IL
184	J. EDWARD BROWN	3010 ELLIS ROAD	KENNESAW	GA
187	J.W. SPEAKER CORPORATION	MB UNIT #6171	MILWAUKEE	WI
191	NORTH AMERICAN ENG. & MFG	2500 EAST 25TH STREET	MINNEAPOLIS	MN
194	SQUARE D COMPANY	P.O. BOX 101814	ATLANTA	GA
195	STANDARD PRODUCTS COMPANY	P.O. BOX 5218-N	CLEVELAND	OH
200	WILLIAMS DETROIT DEISEL A	P.O. BOX 100217	ATLANTA	GA

Vendor	Name	Address	City	Prov/ST
201	TELEFLEX INCORPORATED	P.O. BOX 8500-6865	PHILADELPHIA	PA
205	TOL-O-MATIC	SDS 12-0761	HAMEL	MN
210	TRI/MARK CORPORATION	MB-1029	MINNEAPOLIS	MN
213	TRUCK-LITE COMPANY, INC.	P.O. BOX 910572	DALLAS	TX
215	FEDERAL MOGUL CORPORATION	P.O. BOX 64177	DETROIT	MI
218	COOPER INDUSTRIES/USD	P.O. BOX 70722	CHICAGO	IL
219	UNITED EQUIP. SALES, INC.	P.O. BOX 3258	ATLANTA	GA
221	VALAD ELECTRIC HEATING	P.O. BOX 577	TARRYTOWN	NY
224	DRIVE LINE SERVICE	P.O. BOX 30282	CHARLOTTE	NC
227	DANA-SPICER HIGHWAY	AXLE DIVISION	PLYMOUTH	MN
229	WESTERN ASSOCIATES	P.O. BOX 53084	SAN JOSE	CA
231	WHEELS & BRAKES, INC.	P.O. BOX 198810	ATLANTA	GA
232	WHITE HYDRAULICS, INC.	P.O. BOX 30250	NASHVILLE	TN
233	WISE COMPANY, INC.	5535 PLEASANT VIEW ROAD	MEMPHIS	TN
235	W.W. GRAINGER, INC.	DEPT. 048-800301517	PALATINE	IL
239	MARADYNE CORP.	P.O. BOX 901018	CLEVELAND	OH
243	FORD MOTOR COMPANY	FORD POWER PRODUCTS	CHICAGO	IL
244	NATIONAL SCREENPRINTERS	475 N. DEAN ROAD	AUBURN	AL
245	ASTECHNOLOGIES ENG.	P.O. BOX 740093	ATLANTA	GA
247	INDUSTRIAL PAPER CORP.	300 VILLANOVA DRIVE, S.W.	ATLANTA	GA
251	DOUGLAS CORPORATION	SDS 12-0709	MINNEAPOLIS	MN
256	CUMMINS SOUTH INC.	P.O. BOX 101862	ATLANTA	GA
260	CABLEFORM INC.	P.O. BOX 79109	BALTIMORE	MD
263	Z F INDUSTRIES	P.O. BOX 101756	ATLANTA	GA
266	ROYAL BRASS & HOSE	P.O. BOX 51468	KNOXVILLE	TN
267	ENGINEERED COMPONENTS INC	P.O. BOX 360	THREE BRIDGES	NJ
268	GROTE MANUFACTURING CO.	DEPT. 0116	CINCINNATI	OH
269	QDS COMPONENTS INC.	P.O. BOX 292366	NASHVILLE	TN
275	BRAUN MANUFACTURING CO.	1625-57 N. KOSTNER	CHICAGO	IL
276	REVOLVO, INC.	1629 PERCHERON STREET	MARYVILLE	TN
278	ALL-STATE BELTING COMPANY	1824 INDUSTRIAL CIRCLE	WEST DES MOINES	IA
280	BATTEY MACHINERY COMPANY	P.O. BOX 33	ROME	GA
287	SAFELITE GLASS CORP.	DEPT. 1704	COLUMBUS	OH
288	FERRO UNION SOUTHEAST INC	2005 GRASSLAND PARKWAY	ALPHARETTA	GA
289	CROWN METRO	P.O. BOX 5375	CHARLOTTE	NC
290	DEERE MARKETING SERVICES	P.O. BOX 397	DAVENPORT	IA
291	GRAND MUFFLERS & RADIATOR	1607 SOUTH COBB DRIVE	MARIETTA	GA
292	PARKER HANNIFIN CORP.	P.O. BOX 75773	CHARLOTTE	NC



Vendor	Name	Address	City	Prov/ST
295	BENDIX ALLIED SIGNAL	P.O. BOX 92230	CHICAGO	IL
297	FEDERAL MOGUL CORPORATION	P.O. BOX 64177	DETROIT	MI
301	TECHNICON INDUSTRIES INC.	P.O. BOX 564	CONCORD	NC
304	VELVAC INC.	BIN NO. 53052	MILWAUKEE	WI
305	SEATS INC.	DRAWER 361	MILWAUKEE	WI
308	MCNICHOLS COMPANY	BOX 931099	CLEVELAND	OH
309	INSULTRON, INC.	15001 WALDEN RD.	MONTGOMERY	TX
310	MEADOWVIEW MINING WHEELS	P.O. BOX 250	MEADOWVIEW	VA
315	TRADEWINDS POWER CORP.	5820 NW 84TH AVENUE	MIAMI	FL
318	MATHISON GLASS, INC.	483 ATLANTA STREET	MARIETTA	GA
320	AMERIGAS PARTS CENTER	2719 WOODWIN ROAD	ATLANTA	GA
321	CAPITOL RUBBER & GASKET	P.O. BOX 859	LITHONIA	GA
324	STANT INC.	P.O. BOX 71658	CHICAGO	IL
327	CID	1810G AUGER DRIVE	TUCKER	GA
329	LONDON HARNESS & CABLE CO	16 EAST WISTER STREET	PHILADELPHIA	PA
330	BAIRSTOW DISTRIBUTING CO.	1785 ELLSWORTH IND. DRIVE	ATLANTA	GA
339	YOUNG WINDOWS, INC.	BROOK & COLWELL ROADS	CONSHOHOCKEN	PA
340	NORTHWESTERN MOTOR CO.	CB-007	MINNEAPOLIS	MN
342	EATON-FULLER CORPORATION	P.O. BOX 75360	CHARLOTTE	NC
345	COLE HERSEE COMPANY	P.O. BOX 3229	BOSTON	MA
346	GRAYBAR	CALLER BOX 7300	NORCROSS	GA
348	MAGNA POWER INC.	IOWA INDUSTRIAL HYD. DIV.	CHICAGO	IL
350	MINOR RUBBER CO.,INC.	49 ACKERMAN STREET	BLOOMFIELD	NJ
351	INTERNATIONAL SUPPLY CO.	P.O. BOX 2187	HENDERSONVILLE	TN
354	CLARKLIFT OF ATLANTA, INC	LOCKBOX #101053	ATLANTA	GA
360	DONALDSON AIR FILTERS	P.O. BOX 2265	PEACHTREE CITY	GA
361	A & E CONVEYOR SYSTEMS	BOX 1314	HOLLY SPRINGS	GA
362	MAYOR ELECTRIC SUPPLY CO.	P.O. BOX 5150	NORCROSS	GA
364	TOM JUMPER CHEVROLET	C/O INTERSTATE BILLING	BIRMINGHAM	AL
366	MULHERN BELTING COMPANY	P.O. BOX 620	OAKLAND	NJ
368	SPARTAN LINCOLN MERCURY	1425 SOUTH LAKE PARKWAY	MORROW	GA
370	WRENN HANDLING INC.	DRAWER CS 100916	ATLANTA	GA
371	DATCON INSTRUMENT CO.	P.O. BOX 11579	BOSTON	MA
378	MCMASTER-CARR SUPPLY CO.	P.O. BOX 7690	CHICAGO	IL
380	VOLTEX/BARTOW BATTERIES	P.O. BOX 48736	ATLANTA	GA
381	CMC OF GEORGIA INC.	P.O. BOX 218	WINDER	GA
384	O'NEAL STEEL INC.	P.O. BOX 100558	ATLANTA	GA
388	HERCULES ENGINES INC.	P.O. BOX 26188	ARKON	OH

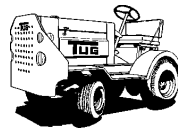


Vendor	Name	Address	City	Prov/ST
396	J-DAK INC.	P.O. BOX 68	ORLINDA	TN
397	DOWNEY'S OF KENNESAW #17	2288 SCENIC HWY.	SNELLVILLE	GA
398	MIKE'S TROPHIES & AWARDS	3073 CHEROKEE STREET	KENNESAW	GA
399	SIGNALTONE INC.	946 FRISBIE STREET	CADILLAC	MI
400	SUPERIOR ROPE & SLINGS	P.O. BOX 64164	BALTIMORE	MD
407	A-1 AUTOMOTIVE ELECTRIC	491 BROWN AVE.	WILKINSTWNSHIP	PA
411	AMERICAN BEARING & POWER	P.O. BOX 65786	CHARLOTTE	NC
413	A & L SYSTEMS & CONTROLS	15091 NORTHVILLE ROAD	PLYMOUTH	MI
419	PULSAR INDUSTRIES, INC.	P.O. BOX 42	CRUM LYNNE	PA
423	ACWORTH AUTO PARTS	4147 SOUTH MAIN STREET	ACWORTH	GA
424	JOHN'S MANUFACTURING	P.O. BOX 5028	KENDALLVILLE	IN
425	HARLAN CORPORATION	P.O. BOX 15077	KANSAS CITY	MO
429	KNR TOOL & DIE COMPANY	P.O. BOX 1728	MARIETTA	GA
432	ADVANCED FLUID SYSTEMS	P.O. DRAWER 648	LAWRENCEVILLE	GA
434	GNB INDUSTRIAL BATTERY CO	P.O. BOX 65647	CHARLOTTE	NC
441	ROCHESTER GAUGES INC.	P.O. BOX 29242	DALLAS	TX
442	APD DANA CORPORATION	P.O. BOX 7038	INDIANAPOLIS	IN
272	HAYES INDUSTRIAL BRAKES	P.O. BOX 97550	DALLAS	TX
307	ORTON INDUSTRIES	P.O. BOX 620130	DORAVILLE	GA
361	A & E CONVEYOR SYSTEMS	BOX 1314	HOLLY SPRINGS	GA
362	AAA COOPER TRANSPORTATION	P.O. BOX 6827	DOTHAN	AL
363	ABF FREIGHT SYSTEMS, INC.	4820 MENDEL CT SW	ATLANTA	GA
364	ADMIRAL EXPRESS	P.O. BOX 66725	CHICAGO	IL
365	ADVANTIS	P.O. BOX 98880	CHICAGO	IL
366	AIRBORNE EXPRESS	P.O. BOX 91001	SEATTLE	WA
367	A&L SYSTEMS & CONTROLS	15091 NORTHVILLE ROAD	PLYMOUTH	MI
368	A.L. HANSEN MFG. COMPANY	DEPT. #1	LIBERTYVILLE	IL
369	ALABAMA LASER TECHNOLOGIE	P.O. BOX 55	MUNFORD	AL
370	ALBION INDUSTRIES, INC.	P.O. BOX 98709	CHICAGO	IL
371	ALLIED CARRIERS EXCHANGE	P.O. BOX 17626	DENVER	CO
372	ALLIED AUTOMOTIVE	P.O. BOX 67-174	DETROIT	MI
373	AMERICAN HI-LIFT	5260 TRUMAN DRIVE	DECATUR	GA
374	AMERICAN FREIGHTWAYS	P.O. BOX 840	HARRISON	AK
376	AMERIGAS	13 WOMACK DR.	CARTERSVILLE	GA
377	ANIXTER DISTRIBUTION	P.O. BOX 195085	CHARLOTTE	NC
378	ANR FREIGHT SYSTEMS, INC.	DEPARTMENT 170	DENVER	CO
379	ANY TIME SERVICE COMPANY	P.O. BOX 90178	EAST POINT	GA
380	ARI SAFETY & SUPPLY	2523 S. MCDONOUGH ROAD	ORCHARD HILL	GA



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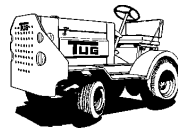
Vendor	Name	Address	City	Prov/ST
381	ARKANSAS FREIGHTWAYS INC.	P.O. BOX 840	HARRISON	AK
382	ASAP DELIVERY INC.	P.O. BOX 20824	ATLANTA	GA
383	ASSOCIATED AIR FREIGHT	P.O. BOX 5015	NEW HYDE PARK	NY
384	AT&T COMMUNICATIONS	P.O. BOX 195109	CHARLOTTE	NC
385	ATLANTA ARMY-NAVY SUPPLY	1125 HAYES INDUSTRIAL DRIVE	MARIETTA	GA
386	ATLANTA CASTER DIVISION	3501 DETROIT AVENUE	CLEVELAND	OH
387	ATLANTA CRANE & CONVEYOR	P.O. BOX 452	ALPHARETTA	GA
388	ATLANTA MOTOR LINES, INC.	P.O. BOX 345	CONLEY	GA
389	ATLANTA TOOL & JACK SALES	3286 HUMPHRIES HILL ROAD	AUSTELL	GA
390	AUTOMATIC DATA PROCESSING	P.O. BOX 78130	PHOENIX	AZ
391	AVERITT EXPRESS, INC.	P.O. BOX 3145	COOKEVILLE	TN
392	AVIS	P.O. BOX 772	GARDEN CITY	NY
393	BASF CORPORATION	P.O. BOX 75406	CHARLOTTE	NC
394	BENNETT MOTOR EXPRESS	P.O. BOX 569	MCDONOUGH	GA
395	BFI WASTE SYSTEMS OF GA	P.O. BOX 2403	MEMPHIS	TN
396	BINDERS, INC.	2833-35 GRIFFITH STREET	CHARLOTTE	NC
397	BIRMINGHAM NASHVILLE EXP.	P.O. BOX 100417	NASHVILLE	TN
398	BLACKSTOCK'S INC.	4950 S. ROYAL ATLANTA DRIVE	TUCKER	GA
399	BLALOCK MACHINERY & EQUIP	P.O. BOX 490407	COLLEGE PARK	GA
400	BOWER'S TRUCKING	P.O. BOX 2428	OROVILLE	CA
401	BOWMAN TRANSPORTATION INC	ATTN: CASHIER DEPARTMENT	ATLANTA	GA
402	BRAYCON INTERNATIONAL	665 MILLWAY AVENUE	CONCORD	ONT
403	BREEZE INDUSTRIAL PRODUCT	100 AERO-SEAL DRIVE	SALTSBURG	PA
405	BURLINGTON AIR EXPRESS	DEPARTMENT CH. 10391	PALATINE	IL
406	BURLINGTON AIR EXPRESS	P.O BOX 371963M	PITTSBURGH	PA
407	BURLINGTON NORTHERN AIR	P.O. BOX 70087	CHARLOTTE	NC
408	C & D POWER SYSTEMS, INC.	P.O. BOX 100620	ATLANTA	GA
409	C P AMERICA	P.O. BOX 37560	MILWAUKEE	WI
411	CABLE & WIRELESS COMM.	P.O. BOX 371968	PITTSBURGH	PA
412	CAMERON & BARKLEY COMPANY	P.O. BOX 118006	CHARLESTON	SC
413	CAMERON GLASS	P.O. BOX 471500	TULSA	OK
414	CAREYS MACHINE SHOP	P.O. BOX 150007	ATLANTA	GA
415	CARLSON COMPANY	33 NORTH AVENUE, NW	ATLANTA	GA
416	CARLSON MUFFLER SALES INC	P.O. BOX 832	FAYETTIVILLE	GA
417	CAROLINA FREIGHT CARRIERS	DRAWER 700	CHERRYVILLE	NC
418	CENTRA, INC.	P.O. BOX 80	WARREN	MI
419	C&H DISTRUBUTORS, INC.	P.O. BOX 53031	MILWAUKEE	WI
420	CHAMPION TRANS. SERVICES	1361 N. WOOD DALE ROAD	WOOD DALE	IL

<u>Vendor</u>	<u>Name</u>	<u>Address</u>	<u>City</u>	<u>Prov/ST</u>
421	CHANTLAND COMPANY	P.O. DRAWER A	HUMBOLT	IA
422	CHEVRON U.S.A., INC.	P.O. BOX 2001	CONCORD	CA
423	CHURCHILL TRUCK LINES INC	BOX 250	CHILLICOTHE	MO
424	CIRCLE FREIGHT CORP.	DRAWER C 198449	ATLANTA	GA
425	CLEVELAND EXPRESS, INC.	414 SOUTH LEE HIGHWAY	CLEVELAND	TN
427	CF MOTORFREIGHT	P.O. BOX 73615	CHICAGO	IL
428	CONVEYORS & DRIVES, INC.	P.O. BOX 19955	ATLANTA	GA
429	CON-WAY SOUTHERN EXPRESS	P.O. BOX 93990	CHICAGO	IL
430	COOPER & ASSOCIATES, INC.	P.O. BOX 6522	MARIETTA	GA
431	COOPER INDUSTRIES/USD	P.O. BOX 70722	CHICAGO	IL
433	COVERALL SERVICES INC.	2675 PACES FERRY ROAD	ATLANTA	GA
434	CPM	5390 PEACHTREE IND. BLVD.	NORCROSS	GA
435	CURTIS 1000	P.O. BOX 105082	ATLANTA	GA
436	DALLAS & MAVIS FWD., CO.	P.O. BOX 97840	CHICAGO	IL
437	DELTA AIR LINES, INC.	P.O. BOX 105531	ATLANTA	GA
438	DEPENDABLE COURIER SRVC.	P.O. BOX 930339	ATLANTA	GA
439	DESIGN GRAPHICS	2931 LEWIS STREET	KENNESAW	GA
440	DIGITEL CORPORATION	2600 SCHOOL DRIVE	ATLANTA	GA
441	DIVERSIFIED ELECTRONICS	P.O. BOX 584	FOREST PARK	GA
442	APPLIED INDUSTRIAL TECH	P.O. BOX 6339-T	CLEVELAND	OH
444	DOALL SOUTH ATLANTIC	431 MARIETTA STREET, NW	ATLANTA	GA
445	DONTO TRANSPORT	28950 GODDARD ROAD	ROMULUS	MI
446	DOZIER EQUIPMENT INTL.	P.O. BOX 30029	NASHVILLE	TN
447	EISON INDUSTRIAL SALES	5800 OAKBROOK PKWY.	NORCROSS	GA
448	EMERY WORLDWIDE	BOX 371232M	PITTSBURGH	PA
449	EMO TRANS	P.O. BOX 45059	ATLANTA	GA
450	FEDERAL EXPRESS CORP.	P.O. BOX 1140	MEMPHIS	TN
451	FEDERAL KEMPER LIFE ASSR.	BIN 0131	MILWAUKEE	WI
452	FILM TRANSIT	P.O. BOX 18642	MEMPHIS	TN
453	FINA OIL & CHEM. COMPANY	P.O. BOX 659516	SAN ANTONIO	TX
454	FLAG SERVICE CENTER	2486 SOUTH MAIN STREET	KENNESAW	GA
455	AMERIPRESS	200 N. FAIRGROUND STREET	MARIETTA	GA
456	FREEMAN ELECTRIC COMPANY	5840 OLD TEAL ROAD	HIRAM	GA
457	FULTON PAPER COMPANY	P.O. BOX 102014	ATLANTA	GA
458	FULTON SUPPLY COMPANY	P.O. BOX 4028	ATLANTA	GA
460	GENUINE PARTS COMPANY	P.O. BOX 2000	NORCROSS	GA
461	GEORGIA STORAGE SYSTEMS	1939 "B" PARKER COURT	STONE MOUNTAIN	GA
462	GREAT SOUTHWEST EXPRESS	P.O. BOX 569	STOCKBRIDGE	GA



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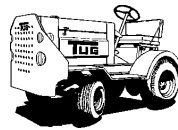
Vendor	Name	Address	City	Prov/ST
463	GREAT VALLEY INDUSTRIES	118 SUMMIT DRIVE	EXTON	PA
464	GREEN GUARD	P.O. BOX 71032	MARIETTA	GA
465	HAMLIN INC.	P.O. BOX 160	KENNESAW	GA
466	HAMMOND HARDWARE & SUPPLY	180 N. FAIRGROUND STREET	MARIETTA	GA
467	HEAVY DUTY PARTS, INC.	P.O. BOX 955	CONLEY	GA
468	HERTZ SYSTEM INC.	P.O. BOX 25485	OKLAHOMA CITY	OK
469	HEUER INTERNATIONAL TRUCK	P.O. BOX 3049	KENNESAW	GA
470	THE HIPAGE COMPANY	P.O. BOX 20806	ATLANTA	GA
471	HOBART BROTHERS COMPANY	P.O. BOX 66226	CHICAGO	IL
472	HOLDEN LOOSE LEAF	P.O. BOX 650037	DALLAS	TX
473	HOME DEPOT	P.O. BOX 660335	DALLAS	TX
474	HUBS & WHEELS, INC.	ROUTE 2, BOX AA	SALTVILLE	VA
475	HUMBOLT EXPRESS, INC.	P.O. BOX 100906	NASHVILLE	TN
476	HUNTON & WILLIAMS	SUITE 4100 NATIONS BANK PLAZA	ATLANTA	GA
477	HUNTER HVAC SERVICES	2021 MANCHESTER STREET	ATLANTA	GA
478	HYDRAULIC ENTERPRISES INC	30 WANSLEY DRIVE	CARTERSVILLE	GA
479	HOLOX LTD.	P.O. BOX 93526	ATLANTA	GA
480	I.D. PRODUCTS	P.O. BOX 314	HIXSON	TN
481	IMPACT LABEL CORPORATION	3434 S. BURDICK STREET	KALAMAZOO	MI
482	IMAGE AVENUE	1480 F TERRELL MILL ROAD	MARIETTA	GA
483	INDUSTRIAL ELECTRIC INC.	16325 WEST RYERSON ROAD	NEW BERLIN	WI
484	INACOM-SOUTHEAST REG. CTR	P.O. BOX 30000	ORLANDO	FL
485	INDUSTRIAL-IRRIGATION SVS	P.O. BOX 189	HASTINGS	NE
486	INDUSTRIAL PACKAGING SUPP	P.O. BOX 26269	GREENVILLE	SC
487	INDUSTRIAL TAPE & SUPPLY	1061 KING INDUSTRIAL DRIVE	MARIETTA	GA
488	INTERSPED SYSTEMS, INC.	P.O. BOX 90771	LOS ANGELES	CA
489	ITL INDUSTRIAL TIRES INC.	P.O. BOX 77325	DETROIT	MI
490	IRON AGE CORPORATION	P.O. BOX 1449	PITTSBURGH	PA
491	JAKES MANUFACTURING CORP.	P.O. BOX 1973	GREENWOOD	MS
492	JASPER ENG & TRANS EXCHAN	1854 MT. ZION ROAD	MORROW	GA
493	JOINT & CLUTCH	P.O. BOX 30282	CHARLOTTE	NC
494	JONES TRUCK LINES, INC.	610 EAST EMMA AVENUE	SPRINGDALE	AR
495	J.W. SPEAKER CORPORATION	MB UNIT #6171	MILWAUKEE	WI
496	KAR KOLORS	4647 CANTON ROAD, NE	MARIETTA	GA
497	KENT LANDSBERG CO. OF GA	P.O. BOX 100340	ATLANTA	GA
498	K.O. EXPRESS, INC.	P.O. BOX 6	BESSEMER	PA
499	KOLD BAN INT'L.	900 PINGREE ROAD	LAKE IN HILLS	IL
500	KROBLIN REFRIGERATED EXPR	P.O. BOX 64220	ST. PAUL	MN

Vendor	Name	Address	City	Prov/ST
501	LABEL GRAPHICS	1980 F. PARKER COURT	STONE MOUNTAIN	GA
502	LSI GLASS	P.O. BOX 75343	CHICAGO	IL
503	LYNDEN AIR FREIGHT	P.O. BOX 84167	SEATTLE	WA
504	M&A WELDING SUPPLY CO.	P.O. BOX 759	CARTERSVILLE	GA
505	MARIETTA FLOWER SHOPPE	787 ROSWELL STREET	MARIETTA	GA
506	MARIETTA WINNELSON CO.	986 INDUSTRIAL PARK DRIVE	MARIETTA	GA
507	MARKER OFFICE PRODUCTS	315-A GATEWAY DRIVE	NORCROSS	GA
508	THE MASON DIXON LINES	P.O. BOX 80	WARREN	MI
509	MASTERMAN'S	P.O. BOX 411	AUBURN	MA
510	MEDICAL AID SUPPLY HOUSE	P.O. BOX 71032	MARIETTA	GA
511	MERCER TRANSPORTATION	P.O. BOX 35610	LOUISVILLE	KY
512	MILAN EXPRESS CO., INC.	ATTN: ACCOUNTS RECEIVABLE	NASHVILLE	TN
513	MINTON-JONES COMPANY	P.O. BOX 90369	ATLANTA	GA
514	MPC	15 RIDGEWAY ROAD	MARIETTA	GA
515	NATIONAL CAR RENTAL SYST.	P.O. BOX 35226	MINNEAPOLIS	MN
516	NORTHERN	P.O. BOX 1219	BURNSVILLE	MN
517	NORTHSIDE CHEVROLET	P.O. BOX 6158	MARIETTA	GA
518	OFFICE DEPOT	P.O. BOX 182378	COLUMBUS	OH
519	OFFICE SALES & SERVICE CO	31 ATLANTA STREET	MARIETTA	GA
520	OLD DOMINION FREIGHT LINE	P.O. BOX 60908	CHARLOTTE	NC
521	ORSCHELN COMPANY	P.O. BOX 410294	KANSAS CITY	MO
522	OPTI-WORLD	1820 THE EXCHANGE	ATLANTA	GA
523	OVERNITE TRANSPORTATION	P.O. BOX 905385	CHARLOTTE	NC
525	PARKER HANNIFIN CORP.	BRASS PRODUCTS DIVISION	CHARLOTTE	NC
526	PARKER HANNIFIN CORP.	TUBE FITTINGS DIVISION	CHARLOTTE	NC
527	PATTON'S INC.	P.O. BOX 65422	CHARLOTTE	NC
528	PETROLANE GAS SERVICE	301 MARIETTA ROAD	CANTON	GA
529	PFT/ROBERSON	P.O. BOX 71092	CHICAGO	IL
530	P I E NATIONWIDE	1651 BLAIRS BRIDGE ROAD	LITHIA SPRINGS	GA
531	PIONEER RUBBER & GASKET	P.O BOX 1015	TUCKER	GA
532	PITNEY BOWES	P.O. BOX 85390	LOUISVILLE	KY
533	PROFESSIONAL COMPUTER SUP	P.O. BOX 467517	ATLANTA	GA
534	PROLINE CARRIERS	P.O. BOX 71855	CHICAGO	IL
535	PROLINE CARRIERS	P.O. BOX 30261	NASHVILLE	TN
536	PYE-BARKER WELDING SUPPLY	P.O. BOX 81227	ATLANTA	GA
537	QUAKER STATE CORPORATION	P.O. BOX 105543 DEPT. G	ATLANTA	GA
538	RAPID FORMS, INC.	301 GROVE ROAD	THOROFARE	NJ
539	RANGER TRANSPORTATION	P.O. BOX 11407	BIRMINGHAM	AL

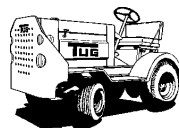


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Vendor	Name	Address	City	Prov/ST
540	RED ARROW DELIVERY SVC.	PORT NASHVILLE BUILDING	NASHVILLE	TN
541	RIGHT-O-WAY	100 E. DALLAS ROAD	GRAPEVINE	TX
542	ROADWAY EXPRESS, INC.	P.O. BOX 905587	CHARLOTTE	NC
543	RPS, INC	DEPT. AT 40601	ATLANTA	GA
544	ROCHESTER GAUGES INC.	P.O. BOX 29242	DALLAS	TX
545	RWS WIRE & CABLE	2300 W. PARK PLACE BLVD.	STONE MOUNTAIN	GA
546	FISHER SCIENTIFIC	DEPT. 340070-01	PITTSBURGH	PA
547	SELIG CHEMICAL IND.	P.O. BOX 43106	ATLANTA	GA
548	SCHNEIDER NATIONAL	P.O. BOX 99419	CHICAGO	IL
550	SOUTH INDUSTRIAL SUPPLY	5586 CRESTWOOD DRIVE	STONE MOUNTAIN	GA
551	SOUTHDOWN ENVIRONMENTAL	P.O. BOX 751534	CHARLOTTE	NC
552	SOUTHEASTERN FREIGHT LINE	P.O. BOX 1691	COLUMBIA	SC
553	SOUTHERN FLUID SYSTEMS	P.O. BOX 93683	ATLANTA	GA
554	SPARTAN EXPRESS, INC.	P.O. BOX 1050	GREER	SC
555	STANDARD TRUCKING COMPANY	P.O. BOX 30725	CHARLOTTE	NC
556	STEWART-WARNER ALEMITE	ATLANTA REGION ACCOUNTS	CHARLOTTE	NC
557	SUPERIOR ROPE & SLINGS	P.O. BOX 64164	BALTIMORE	MD
558	SURFAIR	P.O. BOX 20516	ATLANTA	GA
560	TAYLOR RENTAL	2218 CANTON HIGHWAY	MARIETTA	GA
561	TEBARCO	1905 GRASSLAND PARKWAY	ALPHARETTA	GA
562	TERMINIX INTERNATIONAL	P.O. BOX 7267	MARIETTA	GA
563	TNT HOLLAND MOTOR EXPRESS	750 E. 40TH STREET	HOLLAND	MI
564	TOOLS WAREHOUSE, INC.	2112 FAULKNER ROAD, NE	ATLANTA	GA
565	TOTAL PRINTING SYSTEMS	2001 C. LAKE PARK DRIVE	SMYRNA	GA
566	TRADEWINDS POWER CORP.	5820 NW 84TH AVENUE	MIAMI	FL
567	TRANSUS, INC.	P.O. BOX 6944	ATLANTA	GA
568	TRANSPORT CLEARINGS, INC	P.O. BOX 64220	ST. PAUL	MN
569	TSC EXPRESS	P.O. BOX 1695	ATLANTA	GA
570	TUBE SALES	P.O. BOX 100878	ATLANTA	GA
571	UNDERWRITERS LABORATORIES	P.O. BOX 75330	CHICAGO	IL
572	UNITED PARCEL SERVICE	P.O. BOX 505820	THE LAKES	NV
573	UNITED WAY	P.O. BOX 2692	ATLANTA	GA
574	U.S. RADIATOR CORP.	6710 S. AVALON BLVD.	LOS ANGELES	CA
575	VALLEN SAFETY SUPPLY CO.	P.O. BOX 200097	HOUSTON	TX
576	VERILON PRODUCTS CO.	452 DIENS DRIVE	WHEELING	IL
577	VRN STEEL, INC.	2010 MCFARLAND	ALPHARETTA	GA
582	WIGGINS SCALE COMPANY	P.O. BOX 93051	ATLANTA	GA
583	WOODBURY AND CO., INC.	CHADWICK SQUARE	WORCHESTER	MA

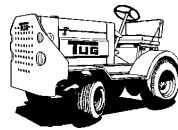


Vendor Name	Address	City	Prov/ST
584	YELLOW FREIGHT	P.O. BOX 195175	CHARLOTTE NC
587	ZIEGLER TOOLS, INC.	P.O. BOX 93958	ATLANTA GA
589	CORROSION SPECIALTIES INC	5215 S. ROYAL ATLANTA DR.	TUCKER GA
590	AMERICAN IND. CHEMICAL CO	P.O. DRAWER CS 198105	ATLANTA GA
591	BURKETT OIL COMPANY INC.	P.O. BOX 2324	NORCROSS GA
593	SHERWIN WILLIAMS CO.	1905 AIRPORT INDUSTRIAL DR.	MARIETTA GA
594	SHERWIN WILLIAMS LEASE CO	DIRECT REVEIVABLES OFFICE	ATLANTA GA
595	STEWART WARNER CORPORATIO	1324 GOODYEAR DR.	EL PASO TX
596	WOODBURY & CO.	1 CHADWICK SQ.	WORCESTER MA
597	BLALOCK MACHINERY		
603	TNT DUGAN INC.	P.O. BOX 9448	WICHITA KS
604	SOFI	99 UNIVERSITY AVE.	ATLANTA GA
616	IQ 2000 INC.	P.O. BOX 930253	ATLANTA GA
617	ROCHESTER GAUGES INC.	P.O. BOX 29242	DALLAS TX
625	APC	P.O. BOX 1450	CARTERSVILLE GA
626	A.N. DERINGER, INC.	P.O. BOX 1309	ST. ALBANS VT
627	LASER SERVICES LTD.	2530 EVERETT ST.	APPLETON WI
628	MACTON EXPRESS LTD.	P.O. BOX 887	TRENTON ONT
629	MSC Industrial Supply	6700 Discovery Boulevard	Mableton GA
630	NATURAL FUELS CORP.	5855 STAPLETON DR. NORTH	DENVER CO
631	SMF & MACHINE TOOLS INC.	3822 MABELVALE PIKE	LITTLE ROCK AK
632	TRISM SPECIALIZED CARRIER	P.O. BOX 954829	ST. LOUIS MO
633	MSC INDUSTRIAL SUPPLY CO.	P.O. BOX 9101	PLAINVIEW NY
634	KLINGSPOR ABRASIVES	P.O. BOX 60560	CHARLOTTE NC
635	GREGORY POOLE EQUIPMENT	P.O. BOX 469	RALEIGH NC
636	DTF TRUCKING INC.	DEPT. 61801	DETROIT MI
637	CHARLES GREER LUMBER CO.	P.O. BOX 330	SUWANEE GA
638	AWC INC.	P.O. BOX 62850	NEW ORLEANS LA
639	ASHLEY SLING INC.	P.O. BOX 44413	ATLANTA GA
640	AT&T EASYLINK SVCS.	CS DRAWER 100659	ATLANTA GA
641	CROSS SYSTEMS	P.O. BOX 16047	GREENSBORO NC
642	A-Z SERVICES	P.O. BOX 1264	ATHENS GA
691	FUNK MANUFACTURING	P.O. BOX 93663	CHICAGO IL
692	HARBOR FREIGHT TOOLS	3491 MISSION OAKS BLVD.	CAMARILLO CA
695	MOLDED DESIGNS TECHNOLOGY	P.O. BOX 4412	ELKHART IN
696	ACE INDUSTRIES	6295 MCDONOUGH DR.	NORCROSS GA
703	DIESEL POWER INJ. & EQUIP	P.O. BOX 609	PINEVILLE NC
716	E.I. DUPONT NEMOURS & CO.	AUTOMOTIVE PRODUCTS	CHARLOTTE NC



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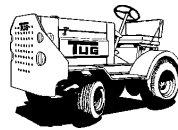
Vendor	Name	Address	City	Prov/ST
717	LANDSTAR RANGER, INC.	P.O. BOX 11407	BIRMINGHAM	AL
718	Atlanta Stud Welding	P.O. Box 58	Milner	GA
719	ALLWORTH, INC.	DEPARTMENT 45801	DETROIT	MI
720	AMERICAN AUTO SERVICE	2217-C COBB PKWY.	KENNESAW	GA
721	GNB INDUSTRIAL BATTERY CO	P.O. BOX 65647	CHARLOTTE	NC
722	AUSTIN HARDWARE	P.O. BOX 9550	RAYTOWN	MO
723	SOUTHERN AUTO COLOR	4700 ECTON DR.	MARIETTA	GA
724	EAGLE USA	P.O. BOX 60467AMF	HOUSTON	TX
728	ASSOCIATES LEASING, INC.	P.O. BOX 411701	KANSAS CITY	MO
729	WWF PAPER CORPORATION	DRAWER CS 198439	ATLANTA	GA
730	AIRGUARD INDUSTRIES, INC.	4000 PLEASANTDALE ROAD	ATLANTA	GA
742	GROUND SUPPORT SPECIALIST	2205 COLE ROAD	HORN LAKE	MS
743	BHL ENTERPRISES, INC.	514 PENNY LANE	WOODSTOCK	GA
744	PRIME EQUIPMENT SALE/RENT	P.O. BOX 840514	DALLAS	TX
745	ATLANTA CLEAN AIR, INC.	2429-A EAST MAIN STREET	SNELLVILLE	GA
746	WORLD AVIATION DIRECTORY	P.O. BOX 629	HIGHTSTOWN	NJ
747	SPACEMASTER INTERNATIONAL	P.O. BOX 1213	NEWARK	NJ
748	GENERAL PUBLICATIONS, INC	P.O. BOX 480	HATCH	NM
749	FRANK L. DEIGAARD	3978 STOVALL TERRACE	ATLANTA	GA
751	TRI-STAR LOGISTICS, INC.	P.O. BOX 475	TAYLOR	MI
752	MAR-LEN SUPPLY, INC.	23159 KIDDER STREET	HAYWARD	CA
753	LAB CORP. OF AMERICA	CASHIER	HERNDON	VA
755	SPIRITWEAR GRAPHICS, INC.	1395-K NORTH COBB PARKWAY	MARIETTA	GA
756	HOLCOMB INDUSTRIES, INC.	3465 NEW HOPE ROAD	DACULA	GA
758	DOUGHERTY EQUIPMENT CO.	P.O. BOX 751090	CHARLOTTE	NC
759	IMPERIAL, INC.	P.O. BOX 11008	GREEN BAY	WI
761	POWER VAC, INC.	2872 WOOD PARK TRACE	KENNESAW	GA
762	CUSTOM TOOL/MANUFACTURING	P.O. BOX 1554	LEXINGTON	KY
763	SAFETY SYSTEMS/CONTROLS	1729 STEBBINS	HOUSTON	TX
764	SUMMIT MEDIA	P.O. BOX 15446	ATLANTA	GA
765	EMED COMPANY, INC.	P.O. BOX 369	BUFFALO	NY
766	MEDICAL SOLUTIONS, INC.	P.O. BOX 652	GRAYSON	GA
767	NEBS	P.O. BOX 370013	BOSTON	MA
768	NORTH COBB ICE COMPANY	2423 DALLAS ACWORTH HWY	DALLAS	GA
769	F&N REPAIR SERVICES, INC.	245 OLD HIGGINS ROAD	DES PLAINES	IL
770	INDUSTRIAL POWER SYSTEMS	3233 OAKLAND STREET	AURORA	CO
772	MAC TOOLS	STEVE BARNES	ROME	GA
773	TOM HARRISON PRINTING	783 BRIAR PARK CT.	ATLANTA	GA

Vendor	Name	Address	City	Prov/ST
774	HIGHWAY EQUIP & SUPPLY CO	P.O. BOX 37150	JACKSONVILLE	FL
775	SUPERIOR MANUFACTURING	135 ANDREWS DRIVE	STOCKBRIDGE	CA
776	CHALLENGE FIRE PROTECTION	P.O. BOX 132	GRAYSON	GA
777	CADILLAC PLASTIC/CHEM.CO	P.O. BOX 70851	CHICAGO	IL
779	INTERNATIONAL ELECTRONICS	427 TURNPIKE STREET	CANTON	MA
780	ALLSTATE LIGHTING/CHEM.	P.O. BOX 639	BARSTOW	CA
781	CCH INCORPORATED	P.O. BOX 4307	CAROL STREAM	IL
782	FRANKLIN QUEST	P.O. BOX 31456	SALT LAKE CITY	UT
783	STARR VINYL SERVICES,INC.	118 DIXIE DRIVE	WOODSTOCK	GA
784	TOWLIFT, INC.	P.O. BOX 92439-N	CLEVELAND	OH
785	ADVANCED HANDLING SYSTEMS	8351 ROSWELL ROAD	ATLANTA	GA
786	EASTERN SERVICE CORP	BOX 102008	ATLANTA	GA
787	TOOLS/EQUIPMENT WAREHOUSE	P.O. BOX 525	ATLANTA	GA
788	TRANSLASER EXPRESS, LLC	BOX #78458	MILWAUKEE	WI
789	ATLANTA HEALTH GROUP/MAR	470 FRANKLIN ROAD, SUITE 106	MARIETTA	GA
790	ACTION SIGNS	425 ERNEST BARRETT PARKWAY	KENNESAW	GA
791	A-AABCO LOCK & KEY, INC	4350 CORNWALLIS CT., NE	MARIETTA	GA
792	BLUE RIBBON ENTERPRISES	DBA/TRAVIS DELIVERY SERVICE	MARIETTA	GA
794	WORLD CLASS WIRE & CABLE	2152 SOUTH 114TH STREET	WEST ALLIS	WI
797	INGERSOLL-RAND COMPANY	AIR COMPRESSOR GROUP	CHARLOTTE	NC
798	POMP'S TIRE SERVICE, INC.	P.O. BOX 1630	GREEN BAY	WI
800	WAYTEK, INC.	P.O. BOX 527	CHANHASSEN	MN
801	WILDER MOTOR & EQUIP CO.	P.O. BOX 24519	NASHVILLE	TN
802	AMR SERVICES CORP.	P.O. BOX 155099	FORT WORTH	TX
803	KEYSTONE GROUND SUPPORT	5925 RAVENSWOOD ROAD	FT. LAUDERDALE	FL
804	MONTE COLLISION CORP	70-06 GARFIELD AVENUE	WOODSIDE	NY
805	OHIO MATERIALS HANDLING	P.O. BOX 14519	CLEVELAND	OH
806	PAMCO STEWART & STEVENSON	DEPT. NO. 502	DENVER	CO
807	GLOBAL EQUIPMENT CO.	P.O. BOX 5200	SUWANEE	GA
808	MACK-BROOKS GROUP	FORUM PLACE	U.K.	
809	CUTTING TOOLS & SERVICE	1880 ENTERPRISE DRIVE	BUFORD	GA
810	USF HOLLAND	P.O. BOX 9021	HOLLAND	MI
812	KEN COOK CO.	P.O. BOX 25267	MILWAUKEE	WI
813	MERCURY AVIATION	1440 TERMINAL WAY	RENO	NV
814	BRYSON GRAPHICS	12210 WEXFORD CLUB DRIVE	ROSWELL	GA
816	OEC SYSTEMS	3404 OAKCLIFF ROAD	ATLANTA	GA
817	Governors America Corp	720 Silver St	Agawam	MA
818	ARTLITE OFFICE SUPPLIES	1851 PIEDMONT ROAD, NE	ATLANTA	GA

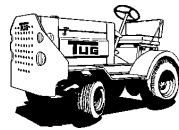


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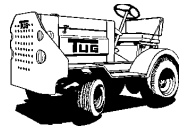


Vendor	Name	Address	City	Prov/ST
819	ATLANTA MOTOR SPEEDWAY	P.O. BOX 500	HAMPTON	GA
820	CLARKLIFT OF ALABAMA,INC.	1660 VANDERBILT ROAD	BIRMINGHAM	AL
822	DanTransport Corporation	P.O. Box 8500-S-6330	Philadelphia	PA
823	EASTERN SHORE ENT.	P.O. BOX 560	WAYNE	PA
824	USF DUGAN	P.O. BOX 9448	WICHITA	KS
826	MIGHTY HOOK, INC.	2522 WEST CHICAGO	CHICAGO	IL
829	SHORE LINE DIESEL MAINT.	P.O. BOX 2646	SAN FRANCISCO	CA
831	PLATT & ASSOCIATES, LC	1494 W. SO. JORDAN PKY	SOUTH JORDAN	UT
832	MITA FINANCIAL SERVICES	P.O. BOX 740423	ATLANTA	GA
833	BARTON ASSOCIATES, INC.	P. O. BOX 353	SNELLVILLE	GA
834	HOWELL'S SUPPLY	5959 YELLOW CREEK ROAD	BALL GROUND	GA
835	Interstate Consolidation		Los Angeles	CA
837	DANKA INDUSTRIES	P.O. BOX 21608	TAMPA	FL
838	DINGS CO.	DRAWER 376	MILWAUKEE	WI
839	FLITE LINE EQUIPMENT CO.	1100 N.W. 163RD DRIVE	MIAMI	FL
840	ALL COUNTY INDUS & MARINE	1429 WILSON AVENUE	NATIONAL CITY	CA
841	ALPHA AWARDS	4016 CANTON ROAD	MARIETTA	GA
842	STANDARD OFFICE SYSTEMS	70 A BULLSBORO DRIVE	NEWNAN	GA
843	LENSCRAFTERS	DEPT. 1537	CINCINNATI	OH
844	CIRCLE ENVIRONMENTAL GRP.	44 OXFORD WEST DRIVE	OXFORD	GA
845	PERIN CO. INC.	21053 ALEXANDER COURT	HAYWARD	CA
846	ARTIC AUTO AIR	2143 NORTH COBB PARKWAY	KENNESAW	GA
847	FORKLIFTS OF ST.LOUIS,INC	P.O. BOX 955025	ST. LOUIS	MO
848	POWERTECH ENGINES,INC.	2003 LEGHORN STREET	MTN.VIEW	CA
849	InterSource Associates	3660 N. Lake Shore Drive	Chicago	IL
850	G. NEIL COMPANIES	P.O. BOX 31038	TAMPA	FL
851	KREILKAMP TRUCKING INC	DRAWER 359	MILWAUKEE	WI
852	SUNBELT MACHINERY, INC.	P.O. BOX 70303	MARIETTA	GA
853	American Modular Systems	P.O. Box 440873	Kennesaw	GA
854	LASER TECH OF GEORGIA	2718 SUMMERS STREET	KENNESAW	GA
856	V.A.C.	400 INTERLOOP ROAD	ATLANTA	GA
859	PENN - Detroit Diesel	P.O. BOX 7777 W7830	PHILADELPHIA	PA
860	S-W AUTO FINISHES CORP.	P.O. BOX 102730	ATLANTA	GA
861	SKYHAWK TRANSPORTATION	P.O. BOX 95	DELMONT	NJ
862	THOMAS HARDWARE PARTS	1001 Rockland Street	Reading	PA
863	STORAGE SPECIALISTS, INC.	3271 S. BIG BEND BLVD.	ST. LOUIS	MO
864	SUPPLY TECH, INC.	1000 CAMPUS DRIVE	ANN ARBOR	MI
866	AMERICAN BELTING, INC	P.O. BOX 1069	FORKED RIVER	NJ

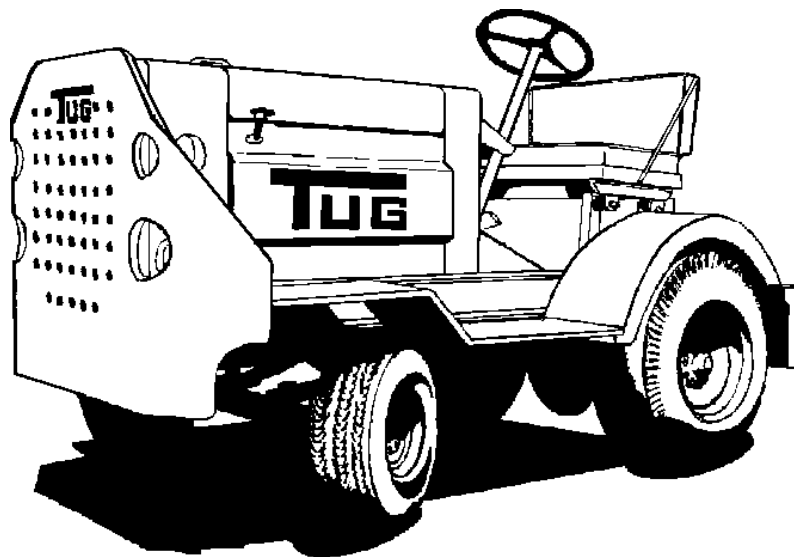


Vendor	Name	Address	City	Prov/ST
867	BOUNDS & CO.	502 ROSWELL GREEN LANE	ROSWELL	GA
868	C-W-C	CARITHERS-WALLACE-COURTENAY	ATLANTA	GA
869	FLEET REPAIR SERVICE	1617 KINGS MILL ROAD	MCDONOUGH	GA
870	PRESTOLITE POWER CORP.	DEPT. #26601	DETROIT	MI
871	MIAMI SYSTEMS CORP.	P.O. BOX 630740	CINCINNATI	OH
872	TUBAN INDUSTRIAL PRODUCTS	2003 LEGHORN STREET	MOUNTAIN VIEW	CA
874	VANTAGE PARTS	P.O. BOX 10890	PORTLAND	OR
875	ACCREDITED LOCK AND SAFE	D/B/A MR. LOCKSMITH	KENNESAW	GA
876	SOUTHERNTIER INDUSTRIAL	683 LONGBOW CT	STONE MOUNTAIN	GA
879	ILLINI POWER PRODUCTS	444 RANDY ROAD	CAROL STREAM	IL

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II. Illustrated Parts List



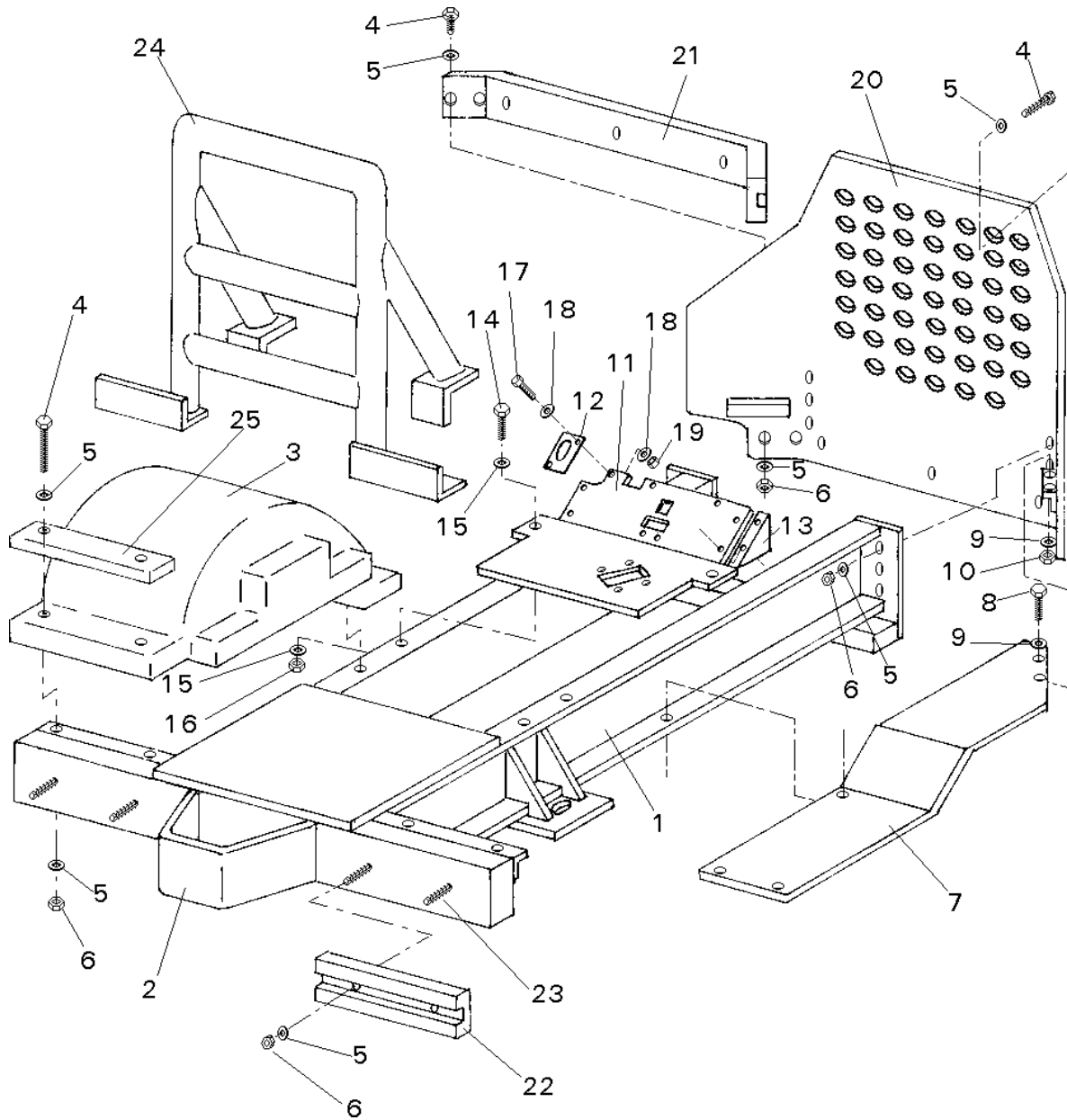
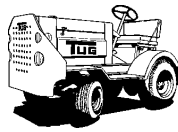


Figure 1: Frame Assembly



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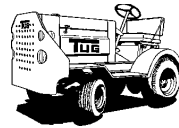


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
1-1	----	-----	T6-4011-115	Frame Weldment	1	001-020
	----	-----	T6-4001-133LM	Frame Weldment, MA-30, 40 Gas, herc. diesel	1	As Req'd
	----	-----	T6-4001-137	Frame Weldment, MA-50 Gas, hercules diesel	1	"
	----	-----	T6-4201-133D	Frame Weldment, MA-30 Perkins Diesel	1	"
	----	-----	T6-4201-137d	Frame Weldment, MA-50 Perkins Diesel	1	"
	----	-----	T6-4201-133on	Frame Weldment, MA-30 Cummins/Onan Diesel	1	"
	----	-----	T6-4201-137on	Frame Weldment, MA-50 Cummins/Onan Diesel	1	"
	----	-----	T6-4001-133GL	Frame Rail, L/H Gas	1	"
	----	-----	T6-4001-133GR	Frame Rail, R/H Gas	1	"
1-2	----	-----	T6-4014-123	Hitch Extension, Standard, Undrilled	1	"
	----	-----	T6-4014-123h	hitch extension, holland 400 hitch	1	"
	----	-----	T6-4014-123p	Hitch extension, pintle hitch	1	"
	----	-----	T6-4014-123ups	Hitch extension, e-hitch (ups)	1	"
	----	-----	T6-4014-123twa	Hitch extension, e-hitch (twa)	1	"
	----	-----	T6-4014-123eal	Hitch extension, e-hitch (eastern air lines)	1	"
	----	-----	T6-1300-314	Hitch extension, slotted	1	"
	----	-----	T6-4014-125	Hitch extension block	1	"
1-	----	-----	T6-4044-127	Backing plate for slotted hitch extention	1	"
1-	----	-----	T6-4011-121	Bracket, Magnet -UPS	1	"
1-	----	-----	T6-9011-393	36" Rear Magnet	1	"
1-	----	-----	T6-9011-364	48" Rear Magnet	1	"
1-	----	-----	660-ND-1816	60" Rear Magnet	ref	"
1-	----	-----	T6-9011-326	Chain, 3/8", Rear Magnet	2	"
1-	----	-----	T6-9011-411	3/8" Quick Link	2	"
1-	----	-----	T6-9011-412	Eyebolt, 1/2" for Magnet Chain	2	"
1-3	----	-----	T6-4002-101	Rear fender, lh, light	1	Note 1
	----	-----	T6-4002-103	Rear fender, lh, heavy	1	Note 2
1-	----	-----	T6-4002-102	Rear fender, rh, light	1	Note 1
	----	-----	T6-4002-104	Rear fender, rh, heavy	1	Note 2
1-	----	-----	T6-4001-138	Rear Bumper, Special 3" Cut w/cutout	1	As Req'd
	----	-----	T6-4034-201	Luggage Rack, NWA	Ref	"
1-4	----	-----	1/2-13ncx3"	Hex head bolt	Ref.	001 & Up
1-5	----	-----	1/2	Flat washer	Ref.	"
1-6	----	-----	1/2-13nc	Locknut	Ref.	"

NOTE: ma-30 and ma-40 use ma-30 frame. heavier tractors use ma-50 frame.

1. Used on MA-30 frames through serial number 6513.

2. Used on MA-50 frames through serial number 6513 and all frames thereafter.

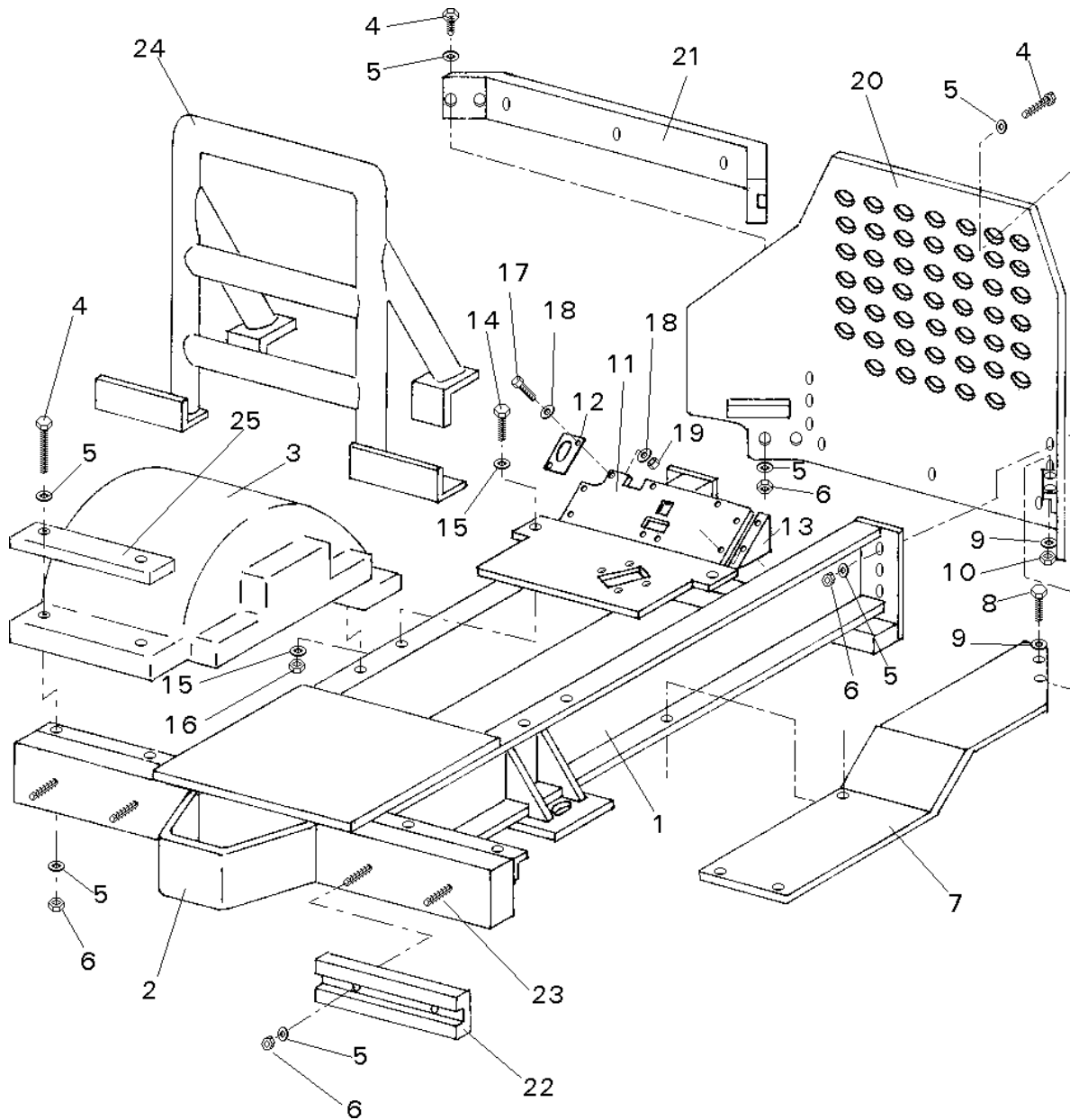
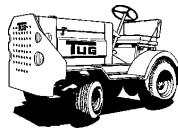


Figure 1: Frame Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
1-7	----	-----	T6-4017-104	Running board, rh	1	001-020
	----	-----	T6-4017-106	Running board, rh	1	021-361
	----	-----	T6-4017-108	Running board, rh	1	362 & Up As Req'd
	----	-----	T6-4017-111	Running board, rh, weighted	1	As Req'd
1-	----	-----	T6-4017-103	Running board, lh	1	001-020
	----	-----	T6-4017-105	Running board, lh	1	021-361
	----	-----	T6-4017-107	Running board, lh	1	362 & Up
	----	-----	T6-4017-109	Running board, lh, weighted, MA50	1	As Req'd
1-	----	-----	T6-9011-409	Fender Step	1	"
1-8	----	-----	3/8-16ncx2-1/4"	Hex head bolt	Ref.	001 & Up
1-9	----	-----	3/8	Flat washer	Ref.	"
1-10	----	-----	3/8-18nc	Locknut	Ref.	"
1-11	----	-----	T6-4021-105	Floorboard, 45°	1	001-361
	----	-----	T6-4021-103	Floorboard, bottom	1	"
	----	-----	T6-4048-103	Floorboard, one-piece, gas	1	362-3344
	----	-----	T6-4048-107	Floorboard, one-piece, diesel	1	"
	----	-----	T6-4048-103/7	Floorboard, universal	1	3345 & Up
1-12	----	-----	T6-4048-205	floorboard closeout, gas	1	3345 & Up
	----	-----	T6-4048-203	floorboard closeout, diesel	1	"
1-13	----	-----	T6-4048-106	floorboard end, rh	1	362 & Up
1-	----	-----	T6-4048-105	floorboard end, lh	1	"
1-14	----	-----	3/8-16ncx1"	hex head bolt	Ref.	001 & Up
1-15	----	-----	3/8	flat washer	8	"
1-16	----	-----	3/8-16nc	locknut	Ref.	"
1-17	----	-----	1/4-20ncx1"	hex head bolt	Ref.	"
1-18	----	-----	1/4	flat washer	Ref.	"
1-19	----	-----	1/4-20nc	locknut	Ref.	"
1-20	----	-----	T6-4016-131	Front Bumper, Standard	1	As Req'd
	----	-----	T6-4016-123g	front bumper, Extended	1	"
	----	-----	T6-4016-133g	front bumper, 1" thick	1	"

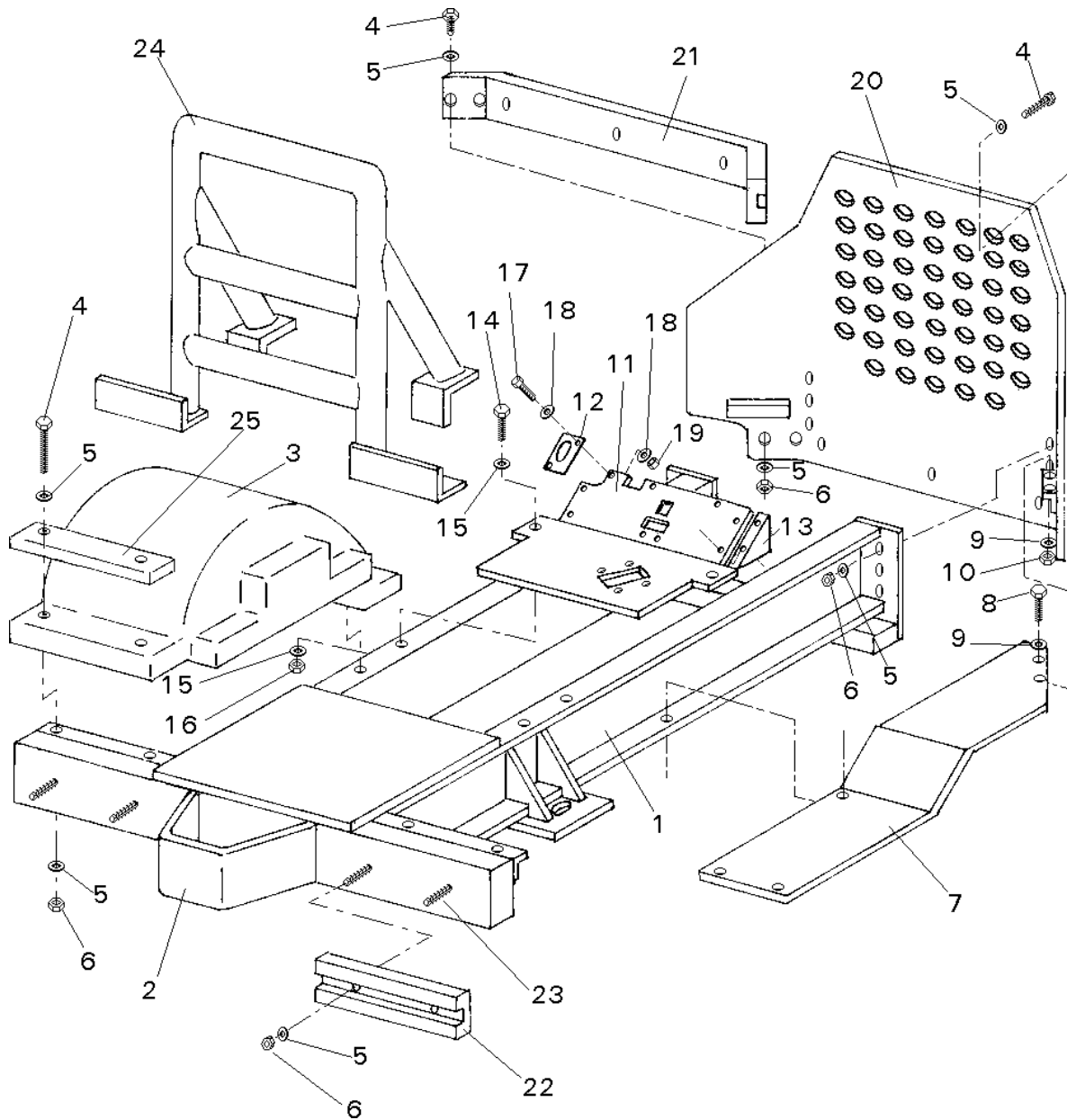
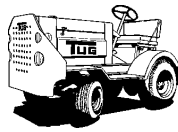


Figure 1: Frame Assembly

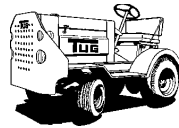


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
1-21	----	-----	T6-4016-121	soft rubber bumper, front, 48"	1	As Req'd
	----	-----	T6-4016-121UP	Bumper, Soft Rubber, Front, 61"	1	"
	----	-----	T6-9011-255	Bumper, Hard Plastic, Front, 60"	1	"
	----	-----	T6-9011-365	hard rubber (edpm) bumper, front, 60"	1	"
	----	-----	T6-9011-362	hard rubber (edpm) bumper, front, 48"	1	"
	----	-----	T6-9011-319	hard rubber (edpm) Bumper, front, used with side hitch	1	"
	----	-----	T6-9011-317	hard rubber (edpm) bumper, front, used with front hitch	2	"
1-22	----	-----	T6-9011-321	hard rubber (edpm) Bumper, rear	2	"
	----	-----	T6-9011-253	soft rubber bumper, rear -UPS	2	"
1-23	----	-----	1/2-13ncx1-1/2"	welding Stud	4	"
1-24	----	-----	T6-9011-353	Barrier bar	1	"
1-25	----	-----	T6-9011-261	rear fender clamping plate, rear (Non-cab)	2	7034 & Up
1-	----	-----	T6-9011-259	rear fender clamping plate, front (non-cab)	2	"
1-	ft	1100021	T6-1300-181	Back-up alarm	1	As Req'd
1-	----	-----	T6-1300-307	p.o.n.y. light bar	1	"
1-	----	-----	T6-1300-308	mounting bracket, p.o.n.y. light bar	2	"
1-	----	-----	OPT-MIS-014	Chockbar	Ref.	As Req'd
1-	----	-----	OPT-MIS-069	Wheel Chock Kit	Ref.	"
1-	----	-----	T6-2004-154	Chock	2	"
1-	----	-----	T6-2004-155	Link	1	"
1-	----	-----	T6-2004-156	Cable	1	"
1-	----	-----	OPT-4034-201	NWA Luggage Rack	1	"
1-	----	-----	T6-200-105	Gritpaper: 12" Wide; 60' Roll	Ref.	"
1-	----	-----	T6-200-106	Gritpaper: 22" Wide; 60' Roll	Ref.	"

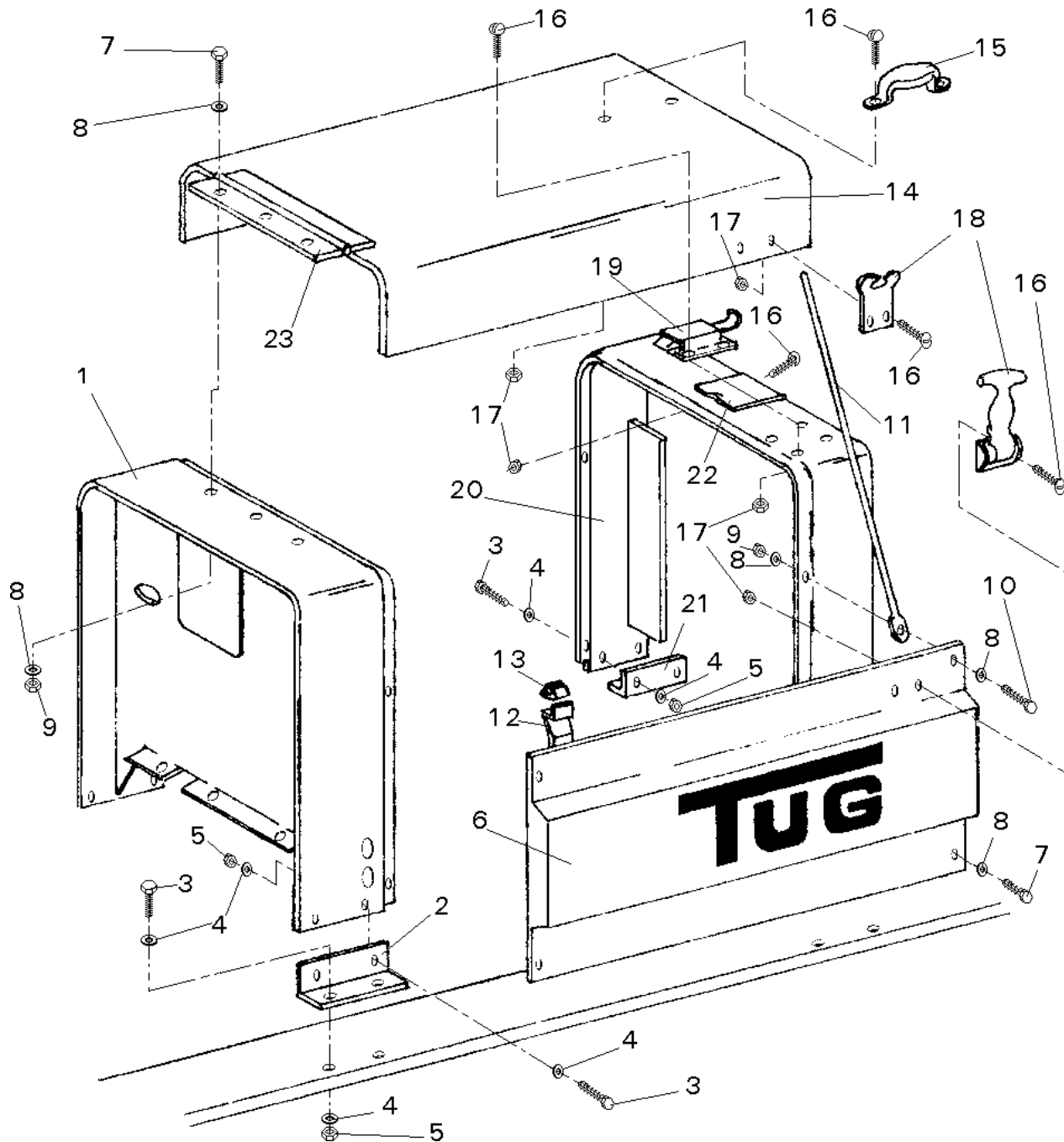
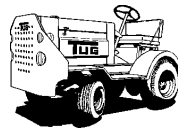


Figure 2: Engine Compartment Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
2-1	----	-----	T6-4004-103	Firewall	1	001 & Up
2-2	----	-----	T6-4004-116	Mounting angle, firewall, rh	1	"
2-	----	-----	T6-4004-115	Mounting angle, firewall, lh	1	"
2-3	----	-----	3/8-16ncx1"	Hex head bolt	16	"
2-4	----	-----	3/8	Flat washer	32	"
2-5	----	-----	3/8-16nc	Locknut	16	"
2-6	----	-----	T6-4006-104	Engine compartment side panel, rh (gas)	1	As Req'd
		-----	T6-4206-106	Side Panel, Diesel	1	"
		-----	T6-4006-106	Engine compartment side panel, rh (diesel, pwr steering)	1	"
2-	----	-----	T6-4006-103	Engine compartment side panel, lh	1	001 & Up
2-7	----	-----	1/4-20ncx1/2"	Hex head bolt	10	"
	79	m01517	T6-4006-121	Fastener, quarter-turn, compartment side panel, bottom	4	As Req'd
	----	-----	T6-4006-121UPS	Fastener, 1/4 Turn -UPS	4	"
2-8	----	-----	1/4	Flat Washer	22	001 & Up
2-9	----	-----	1/4-20nc	Locknut	11	"
2-10	----	-----	1/4-20ncx1"	Hex head bolt	10	"
2-11	----	-----	T6-4005-119	Hood prop rod, side	1	1338 & Up
		-----	T6-4005-101	Hood prop rod, center	1	001-1337
2-	----	-----	T6-4005-113	Angle, hood prop rod	2	"
2-12	----	-----	T6-4005-117	Support, hood prop	2	1338 & Up
2-13	----	-----	T6-4005-121	Clip, hood prop	1	"
2-14	----	-----	T6-4005-120	Hood, with side prop	1	1338 & Up
		-----	T6-4005-103	Hood, with center prop	1	001-1337
2-15	----	-----	T6-4005-109	Handle	1	001 & Up
2-16	----	-----	#10-32nfx1"	Screw	19	"
2-17	----	-----	#10-32nf	Locknut	19	"
2-18	----	-----	T6-4006-111r	Hood latch assembly, rubber	2	As Req'd
	----	-----	T6-4006-111	Hood latch assembly	2	"

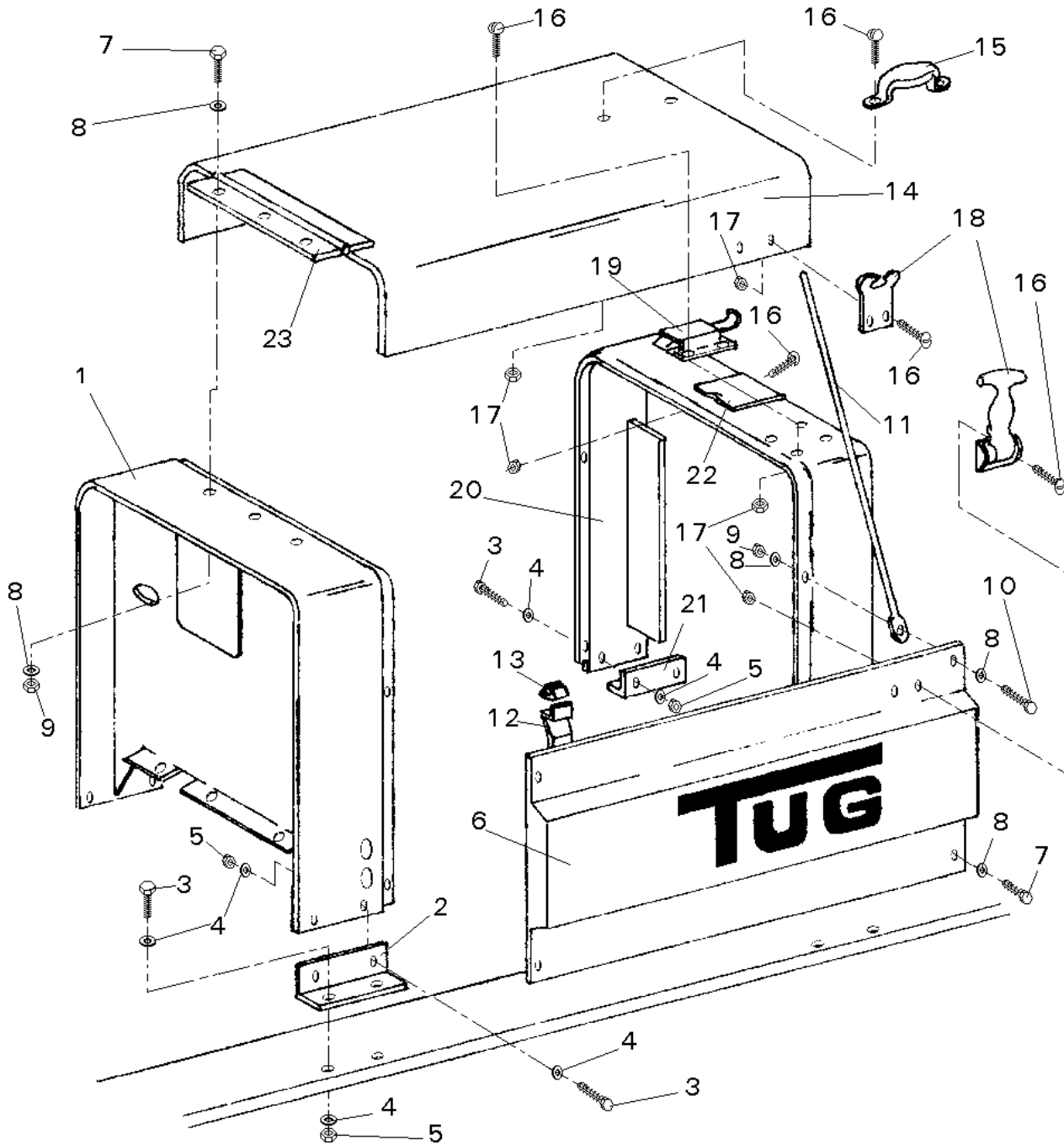
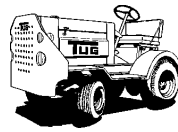


Figure 2: Engine Compartment Assembly



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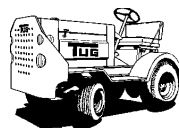


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
2-19	----	-----	T6-4006-115	Hooking Bracket (FOR T6-4006-111)	2	As Req'd
2-20	----	-----	T6-4003-121	Hood lock	1	001 & Up
	----	-----	T6-4003-103	Radiator shroud, gas	1	001-097
	----	-----	T6-4003-117	Radiator shroud, gas	1	098-361
	----	-----	T6-4103-125	Radiator shroud, gas	1	362-926
	----	-----	T6-4103-135	Radiator shroud, gas	1	927-2867
	----	-----	T6-4103-235	Radiator shroud, gas, hercules diesel	1	2868 & Up
	----	-----	T6-4203-101	Shroud, Radiator Perkins, shroud-mounted radiator	1	As Req'd
	----	-----	T6-4203-201	Radiator shroud, perkins, frame-mounted radiator	1	"
	----	-----	T6-3200-137	Radiator shroud, cummins/onan	1	"
2-21	----	-----	T6-4003-113	Mounting angle, radiator shroud	2	362 & Up
2-22	----	-----	T6-4003-123	Shroud hole cover	1	001 & Up
2-18	----	-----	T6-4006-111r	Hood latch assembly, rubber	2	As Req'd
	----	-----	T6-4006-111	Hood latch assembly	2	"
2-19	----	-----	T6-4003-121	Hood lock	1	001 & Up
2-20	----	-----	T6-4003-103	Radiator shroud, gas	1	001-097
	----	-----	T6-4003-117	Radiator shroud, gas	1	098-361
	----	-----	T6-4103-125	Radiator shroud, gas	1	362-926
	----	-----	T6-4103-135	Radiator shroud, gas	1	927-2867
	----	-----	T6-4103-235	Radiator shroud, gas, hercules diesel	1	2868 & Up
	----	-----	T6-4203-101	Radiator shroud, perkins, shroud-mounted radiator	1	As Req'd
	----	-----	T6-4203-201	Radiator shroud, perkins, frame-mounted radiator	1	"
	----	-----	T6-3200-137	Radiator shroud, cummins/onan	1	"
2-21	----	-----	T6-4003-113	Mounting angle, radiator shroud	2	362 & Up
2-22	----	-----	T6-4003-123	Shroud hole cover	1	001 & Up
2-23	----	-----	T6-4055-120H	Hinge, MA Hood	1	"
2-	----	-----	T6-4103-236	Radiator Shroud Hole Cover, Universal	1	As Req'd
	----	-----	T6-4006-113	Rubber Edging (Price per Foot)	Ref.	"
	----	-----	T6-4006-137	Magnetic Tape	Ref.	"
	----	-----	T6-4003-115	Reflector Bracket	2	"

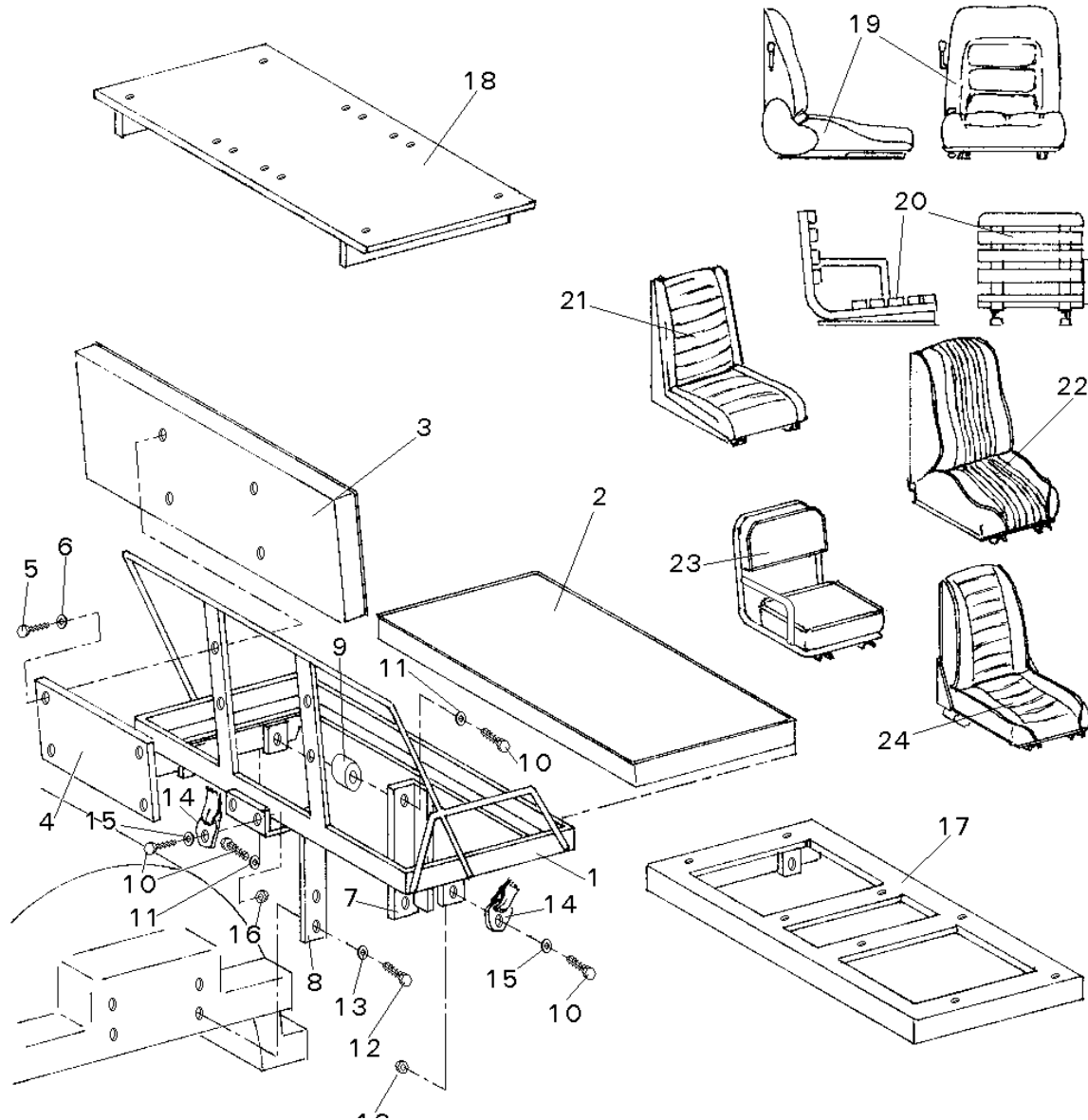
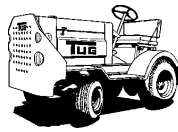


Figure 3: Seat Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
3-1	----	-----	T6-4011-101	Seat frame assembly, 33"	1	Note 1
	----	-----	T6-4511-151	Seat frame assembly, 39"	1	"
3-2	----	-----	T6-4013-101	Cushion, seat bottom, 33"	1	"
	----	-----	T6-4513-101	Cushion, seat bottom, 39"	1	"
3-3	----	-----	T6-4013-103	Cushion, seat back, 33"	1	"
	----	-----	T6-4513-103	Cushion, seat back, 39"	1	"
3-4	----	-----	T6-9005-109a	Asset number plate	1	As Req'd
3-5	----	-----	1/4-20ncx1"	Hex head bolt	4	Note 1
3-6	----	-----	1/4	Lock washer	4	"
3-7	----	-----	T6-4012-103	Angle, seat support, lh, ma-30	1	Note 2
	----	-----	T6-4012-109	Angle, seat support, lh, ma-50	1	Note 3
	----	-----	T6-4012-113	Angle, seat support, lh	1	Note 4
3-	----	-----	T6-4012-104	Angle, seat support, rh, ma-30	1	Note 2
	----	-----	T6-4012-110	Angle, seat support, rh, ma-50	1	Note 3
	----	-----	T6-4012-114	Angle, seat support, rh	1	Note 4
3-8	----	-----	T6-4012-105	Strap, seat support, ma-30	2	Note 2
	----	-----	T6-4012-111	Strap, seat support, ma-50	2	Note 3
	----	-----	T6-4012-115	Strap, seat support,	2	Note 4
3-9	92	50x55	T6-4012-107	Rubber seat mount	4	001 & Up
3-10	----	-----	1/2-13ncx1"	Hex head bolt	12	"
3-11	----	-----	1/2	Lock washer	8	"
3-12	----	-----	3/8-16ncx1"	Hex head bolt	8	"
3-13	----	-----	3/8	Lock washer	8	"
3-14	55	730-3042	660-6-0581-25	Safety belt, standard	2	As Req'd
	55	ZA2611-48-02-1091	T6-9011-103	Safety belt, retracting	2	"
3-15	----	-----	1/2	Flat washer	4	001 & Up
3-16	----	-----	1/2-13nc	Locknut	4	"

Note: ma-30 and ma-40 use ma-30 frame. heavier tractors use ma-50 frame.

1. Used on tractors equipped with standard bench seat only.
2. Used on MA-30 frames through serial number 230.
3. Used on MA-50 frames through serial number 361.
4. Used on MA-30 frames from serial number 231 and all frames from serial number 362.

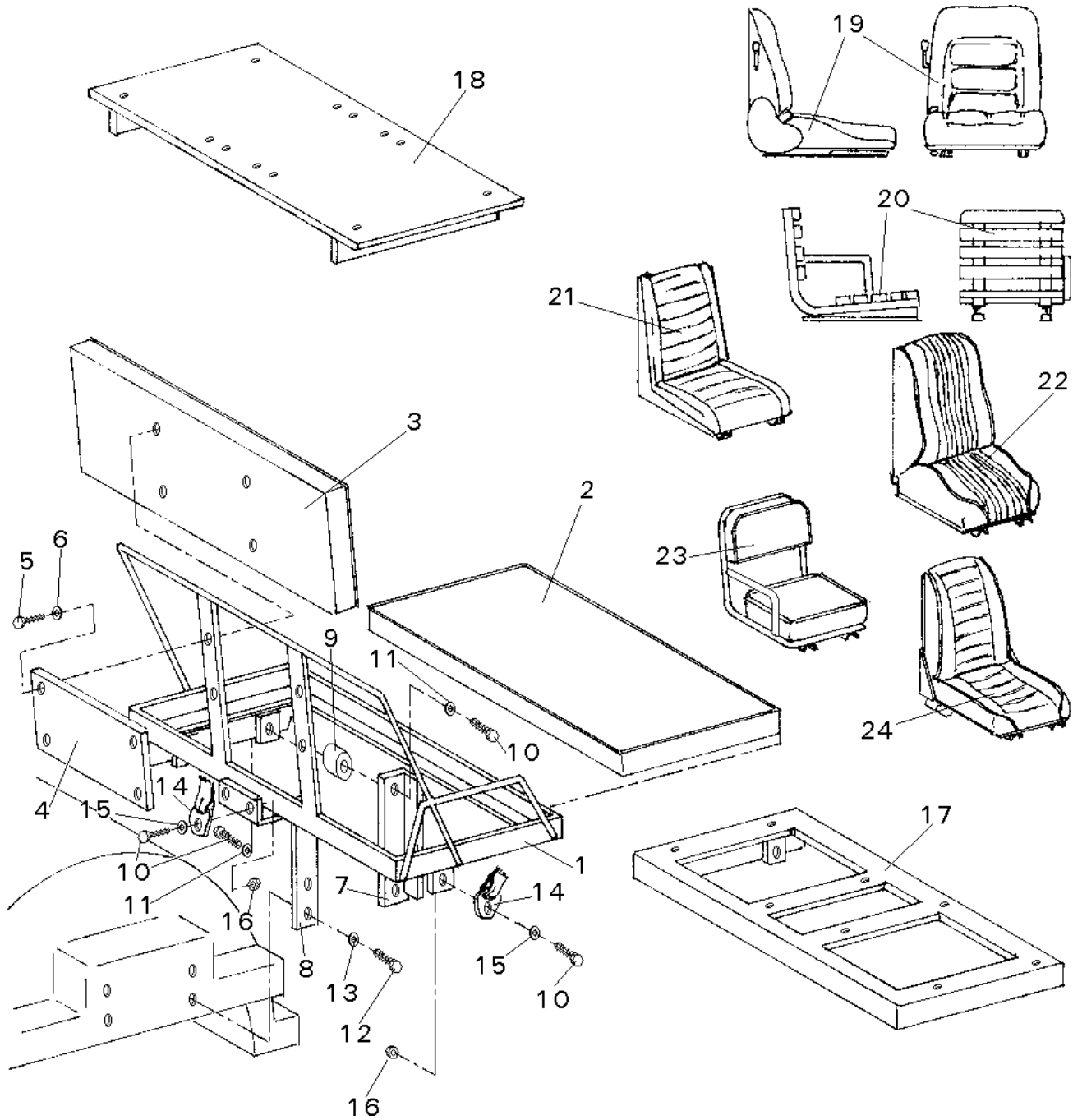
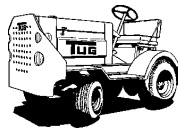


Figure 3: Seat Assembly

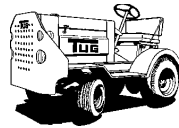


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
3-17	----	-----	T6-4202-103	Seat frame, Dual bucket seats	1	As Req'd
3-18	----	-----	T6-4202-201	Seat Plate, Dual Grammer Seats	1	"
	----	-----	T6-1300-312	Seat Plate, single Grammer Seat	1	"
3-19	246	127266	T6-9011-227	Seat (grammer), without switch	Ref.	"
	246	116356	MG-nd-716	Seat (grammer), vinyl, with switch	1	"
	246	121478	T6-9011-147	Seat (grammer), cloth, with switch	1	"
3-20	----	-----	660-4-0649	Seat assembly, wood, left arm rest	1	"
	----	-----	660-4-0649s	Seat assembly, wood, left and right arm rests	1	"
3-	----	-----	660-4-0649-1	Seat slide (Note 6)	1	Note 5
3-	----	-----	660-4-0650	Frame, wooden seat	2	As Req'd
3-	----	-----	660-2-0689	Strip, oak (wooden seat)	7	"
3-	----	-----	660-2-0690	End strip, oak (wooden seat)	2	"
3-21	233	WM366S	MD-F14-103	Seat, padded bucket, with switch	1	"
3-22	233	wm740	MD-F14-107	Seat, padded bucket	2	"
3-23	233	wm451	T6-4202-115	Seat assembly (Obsolete -No Longer Avail.)	1	"
3-24	233	WM917	4-100-101-a	Seat	2	"
3-	233	60hd	T6-1300-153	Shell, plastic seat	2	"
3-	----	-----	T6-9011-225	Frame, plastic seat	2	"

5. Used on tractors equipped with wooden or plastic seats.

6. One seat slide assembly per seat.

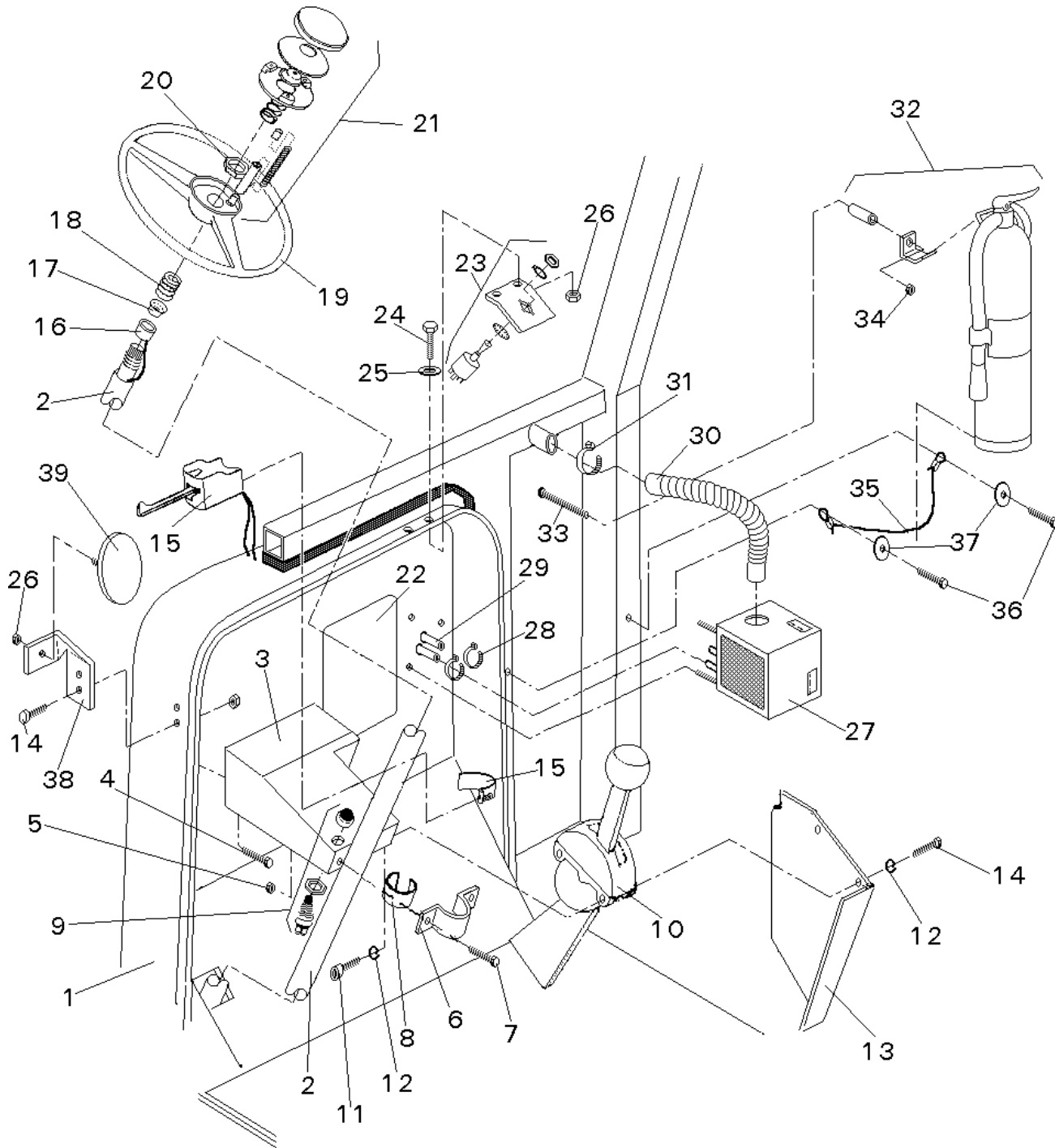
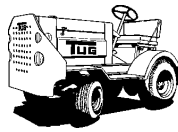


Figure 4: Firewall, Operator's Side

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
4-1	----	-----	T6-4004-103	firewall	1	001 & Up
4-2	436	9512396	T6-5001-101	steering sector (See Fig 37)	1	"
4-	----	-----	T6-9011-331	cover, steering column	1	As Req'd
4-3	----	-----	T6-5005-121	bracket, upper steering sector	1	001 & Up
4-4	----	-----	3/8-16ncx1-1/4"	hex head bolt	2	"
4-5	----	-----	3/8-16nc	locknut	4	"
4-6	----	-----	T6-5005-105	clamp, steering column	1	"
4-7	----	-----	3/8-16ncx2"	hex head bolt	2	"
4-8	----	-----	-----	spacer, steering column clamp	1	"
4-9	158	24-360	X6042-101	switch, (push button), glow plug	1	AS Req'd
4-	158	24-360	X6042-101	switch, Low oil pressure override switch.	1	"
4-10	140	310180	T6-1002-151	Morse Shifter	1	Note 1
	----	-----	T6-1002-101	Morse shifter	1	Note 2
	162	t37001	T6-1002-153	Quadrastat Shifter	1	As Req'd
	----	-----	T6-1002-153m	Quadrastat Shifter, full range	1	"
4-11	----	-----	1/4-20ncx3/4"	socket head cap screw	2	001 & Up
4-12	----	-----	1/4	lock washer	4	"
4-13	----	-----	T6-1003-103	shifter cover	1	"
4-	----	-----	T6-1300-320	cover, steering mount, lh	1	As Req'd
4-	----	-----	T6-1300-321	cover, turn signal wire	1	"
4-14	----	-----	1/4-20ncx3/4"	hex head bolt	2	001 & Up
4-15	297	900	T6-7007-101	turn signal switch	1	As Req'd
4-	127	550	T6-7007-105	flasher	1	"
4-	79	85791	T6-500-137	flasher base	1	"
4-	----	-----	T6-9011-149	Plate, Data -Drawbar	1	101 & Up

1. Used on all units equipped with Morse shifter from serial number 096.
2. Used on all units equipped with Morse shifter through serial number 095. (Replace using part # T6-1002-151.)

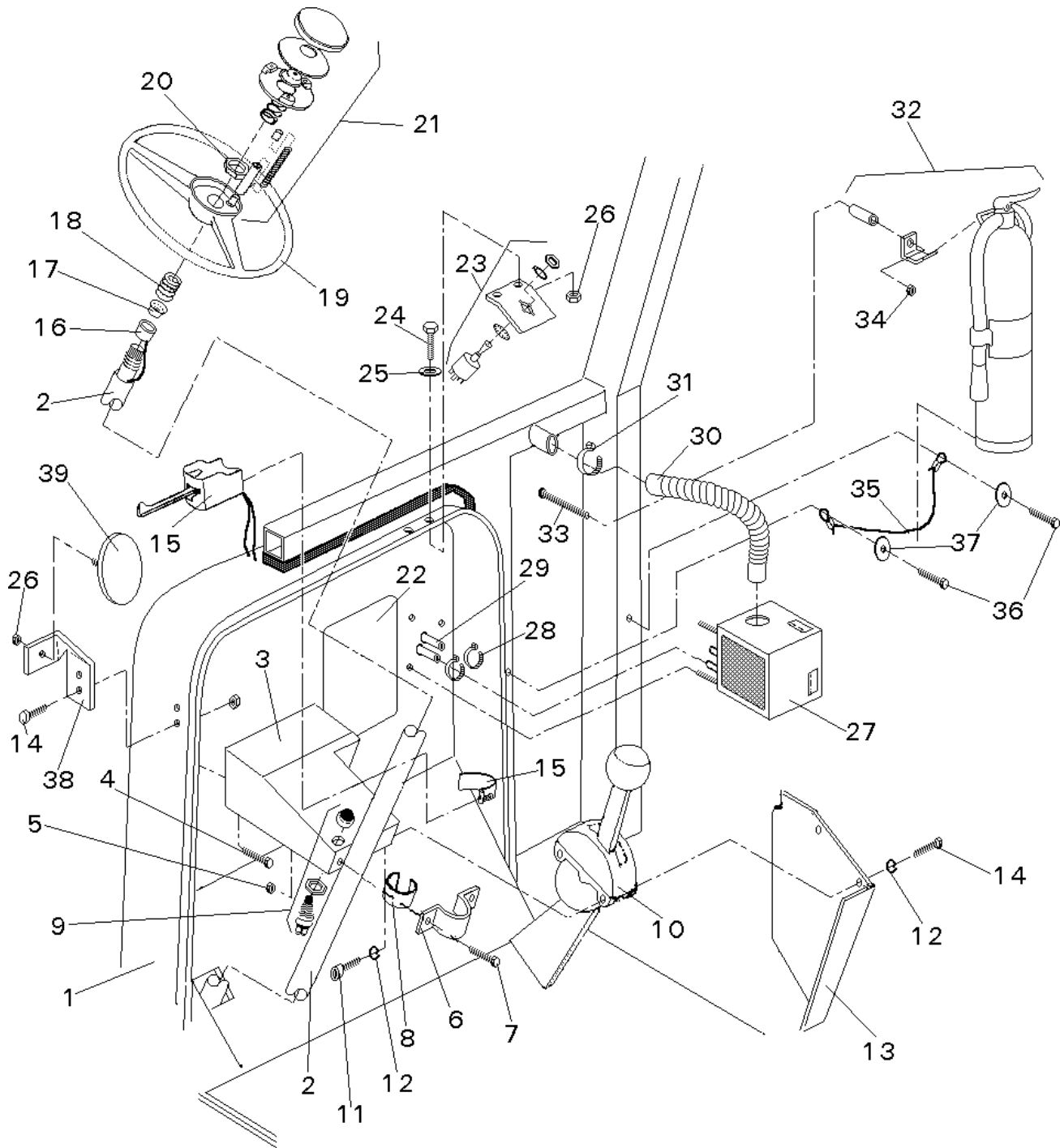
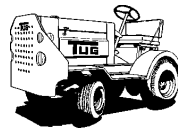


Figure 4: Firewall, Operator's Side

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
4-16	436	7801596	md-cs3-109	upper bearing, steering column	1	001 & Up
4-17	436	264831	md-cs3-113	seat, spring, steering column	1	"
4-18	436	264832	md-cs3-111	spring, steering column	1	"
4-19	182	79219a1	T6-5003-101	steering wheel	1	001 & Up
4-20	-----	-----	T6-5001-103	steering wheel mounting nut	1	"
4-	-----	-----	1/2	washer	1	"
4-21	436	5692044	T6-7012-107	horn button kit, steering wheel	1	As Req'd
	78	fcs-2	T6-9011-241	horn pedal, foot operated	1	"
4-	186	A23788-13	T6-7013-103	relay, horn	1	001-3129
	100	87106	T6-7013-209	relay, horn	1	3130 & Up
4-	186	a27801-15	T6-7013-101	Horn	1	001-3129
	399	40354-21	T6-7013-207	horn	1	3130 & Up
4-22	-----	-----	T6-7010-319	instrument panel: pollack ignition switch, no fuel gauge	1	As Req'd
	-----	-----	T6-7010-323	instrument panel: cole hersee ignition switch, no fuel gauge	1	"
	-----	-----	T6-7010-321	instrument panel: fuel gauge	1	"
	-----	-----	T6-7010-325	instrument panel: fuel gauge, indicator lights	1	"
	-----	-----	T6-7010-335	instrument panel: eng. kill switch, fuel gauge, indicator lights	1	"
4-23	136	22092	T6-1300-197-33	switch, snow plow, 4-way, lift/angle (note 3)	1	"
	136	21919	T6-1300-197-31	Lift switch, snow plow (note 3)	1	"
	136	21918	T6-1300-197-32	Angle switch, snow plow (note 3)	1	"
4-	136	15680	T6-1300-197-22a	harness, single Lever (note 3)	1	"
	136	15478	T6-1300-197-22	harness, dual Lever (note 3)	1	"
4-24	-----	-----	1/4-20ncx3/4"	hex head bolt	2	"
4-25	-----	-----	1/4	flat washer	2	"
4-26	-----	-----	1/4-20nc	locknut	Ref.	As Req'd
4-27	317	2057C003C	T6-9004-103	heater, 12-volt assembly	1	"
	-----	-----	T6-9004-103ger	heater, 12-volt, Padded	1	"
	-----	-----	T6-9004-101	Heater Repair Kit	1	"
4-	id	tc101036	T6-9004-103-1a	core, heater, amfab (new)	1	"
(old)	178	x98-850-002-BES		T6-9004-103-1	core, heater, sgm	
	1	"				
4-	id	tc140009	T6-9004-103-2a	motor, heater, amfab	1	"
	178	0071-0068	T6-9004-103-2	motor, heater, sgm	1	"
4-	id	tc19002	T6-9004-103-3a	fan, heater, amfab	1	"
	178	pc-1000-3	T6-9004-103-3	fan, heater, sgm	1	"

3. 4-Way switch T6-1300-197-33 replaces both switches T6-1300-197-31 and T6-1300-197-32 on later model tractors equipped with snow plow.

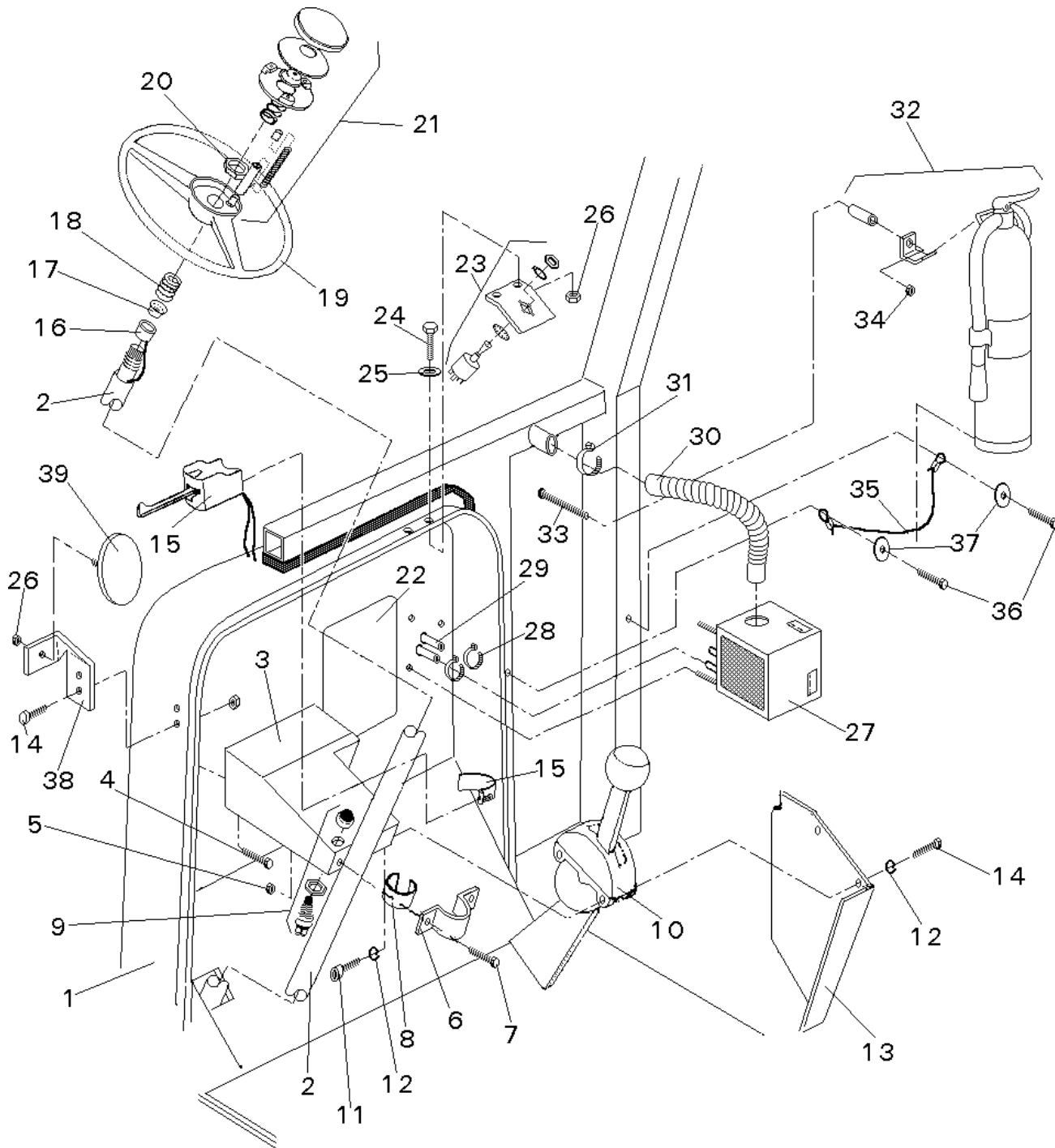
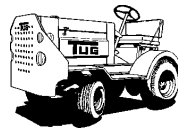


Figure 4: Firewall, Operator's Side

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
4-28	----	-----	#12	hose Clamp	2	As Req'd
4-29	----	-----	5/8"	Heater hose	2	"
4-30	127	81081	cma-607	defroster hose (note 4)	1	"
	----	-----	T6-9003-205	defroster elbow, 45°, rubber (note 4)	1	"
	----	-----	T6-9003-145	defroster elbow, 45°, steel (note 4)	1	"
	----	-----	CMA-608	Heater Shutoff Valve	1	"
4-31	----	-----	#28	hose clamp	1	"
4-32	48	10# purple k	T6-9005-101	Dry chemical fire extinguisher, (class b, c)	1	"
4-33	----	-----	3/8-16ncx1-1/2"	hex head bolt	1	"
	----	-----	1/4-20ncx1"	hex head bolt	3	"
4-34	----	-----	3/8-16nc	locknut	1	"
	----	-----	1/4-20nc	locknut	3	"
4-35	----	-----	3/32x3/16	wire rope, vinyl coated	Ref.	"
4-36	----	-----	1/4-20ncx1"	hex head bolt, self tapping	2	"
4-37	----	-----	1/4x1-1/2"	flat washer	2	"
4-38	----	-----	mh-1-563	mirror bracket	2	"
4-39	----	-----	T6-9011-347	mirror, 5", round	2	"
4-	256	c0322035400	-----	light socket, glow plug	1	Note 5
4-	256	c0322035300	-----	bulb, glow plug light	1	"
4-	----	-----	T6-7022-103p	plug, button, 1/2"	Ref.	001 & Up
4-	----	-----	T6-7022-105p	plug, button, 3/4"	Ref.	"
4-	----	-----	T6-500-109	plug, button, 1-1/4"	Ref.	"
4	102	030-411	T6-7200-005	Multi Alarm (note 6)	1	As Req'd
4-	102	020-111	T6-7200-010	Oil Pressure Switch, 7 psi	1	"
4-	102	020-113	T6-7200-015	Water Temperature Switch, 210 (note 6)	1	"
4-	309	M4502-3899	T6-7200-020	Low Fuel Switch (note 6)	1	"
4-	102	020-004	T6-7200-025	Low Coolant Switch (note 6)	1	"

4. Defroster hose CMA-607 replaces both defroster elbows T6-9003-143 and T6-9003-145 on later model tractors.

5. Used on ractors equipped with Cummins/Onan diesel engine.

6. Oil pressure switch T6-7200-010, water temperature switch T6-7200-015, low fuel switch T6-7200-020 and low coolant switch T6-7200-025 are used with multi alarm T6-7200-005.

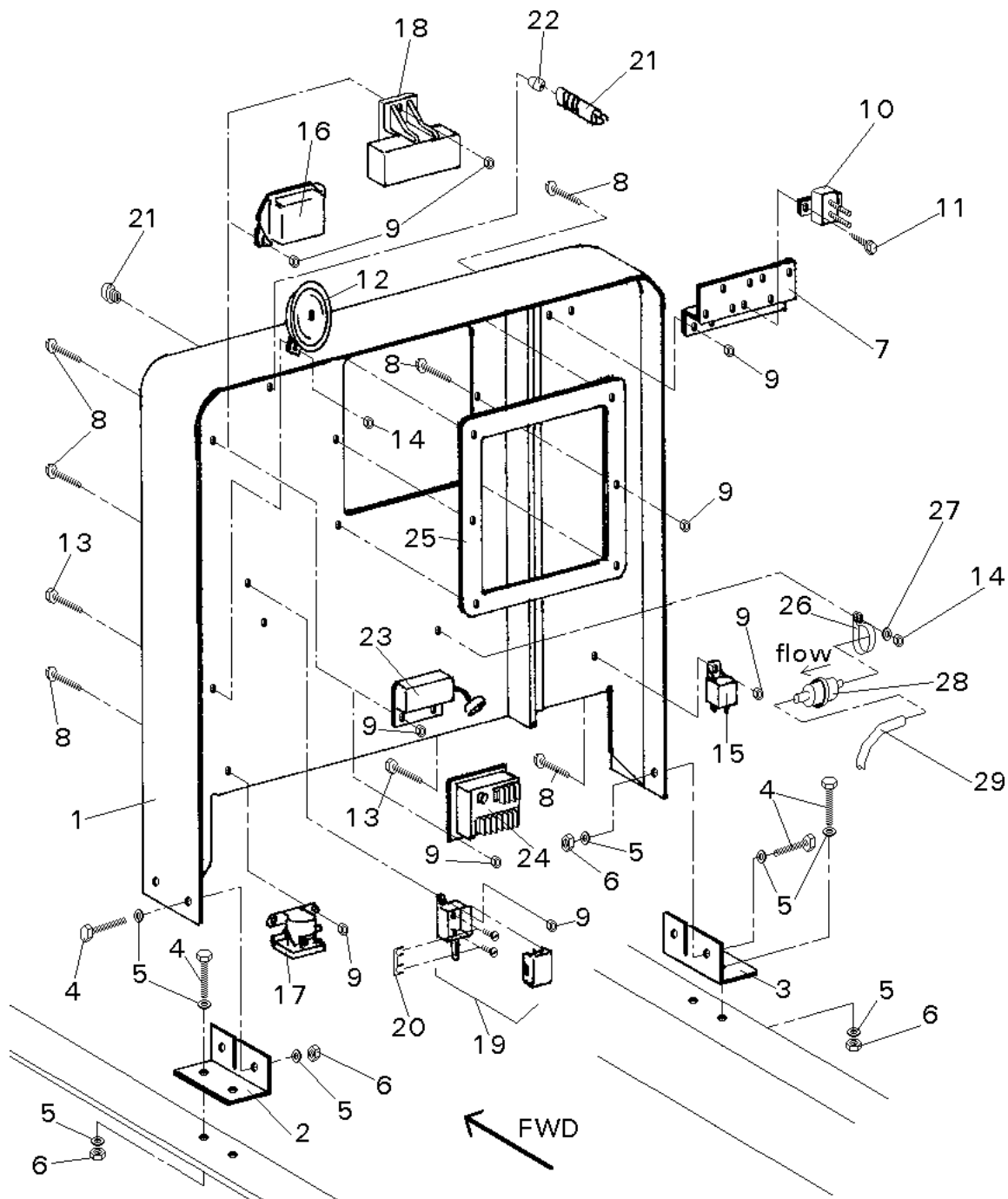
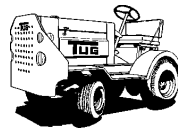


Figure 5: Firewall, Engine Side

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
5-1	----	-----	T6-4004-103	firewall	1	001 & Up
5-2	----	-----	T6-4004-116	mounting angle, firewall, rh	1	"
5-3	----	-----	T6-4004-115	mounting angle, firewall, lh	1	"
5-4	----	-----	3/8-16ncx1"	hex head bolt	8	"
5-5	----	-----	3/8	flat washer	16	"
5-6	----	-----	3/8-16nc	locknut	8	"
5-7	----	-----	T6-7010-211	circuit breaker mount	1	5293 & Up
		-----	X6007-203P	fuse panel (note 1)	1	241-5292
		-----	T6-7008-101b	fuse panel with lugs	1	As Req'd
		-----	T6-7008-101a	fuse panel, used with bus (Note 1)	2	001-240
5-	56	70016/900605	T6-7009-109	Bus panel (note 1)	1	"
5-8	----	-----	#10-32nfx1"	screw	Ref.	001 & Up
5-9	----	-----	#10-32nf	locknut	Ref.	"
5-10	56	72125	660-4-0741-5	circuit breaker	Ref.	5293 & Up
	127	cb5	T6-7010-203	circuit breaker, plug into fuse panel	8	As Req'd
5-11	----	-----	#10-1/2"	sheet metal screw	Ref.	5293 & Up
5-12	186	a270801-15	T6-7013-101	horn	1	001-3129
	----	-----	T6-7013-208	Horn, Delco (UPS Option)	1	As Req'd
	399	40354-21	T6-7013-207	horn	1	3130 & Up
5-13	----	-----	1/4-20ncx1-1/2"	hex head bolt	1	001 & Up
5-14	----	-----	1/4-20nc	locknut	1	"
5-15	186	a23788-13	T6-7013-103	Relay, Horn	1	001-3129
	100	87106	T6-7013-209	relay, horn	1	3130 & Up
5-16	127	vr301	T6-7002-103	voltage regulator, gas	1	001-164
	----	-----	T6-7002-111	voltage regulator, gas (Obsolete -use T6-7002-103)	1	165 & Up
5-17	127	ss157	T6-7010-201	starter relay, motorcraft starter	1	As Req'd
	61	24059	660-4-0741-6	starter relay, perkins dsl with low fuel shutdown	2	As Req'd

1. Fuse panel X6007-203P replaces 2 fuse panels T6-7008-101A and bus panel T6-7009-101.

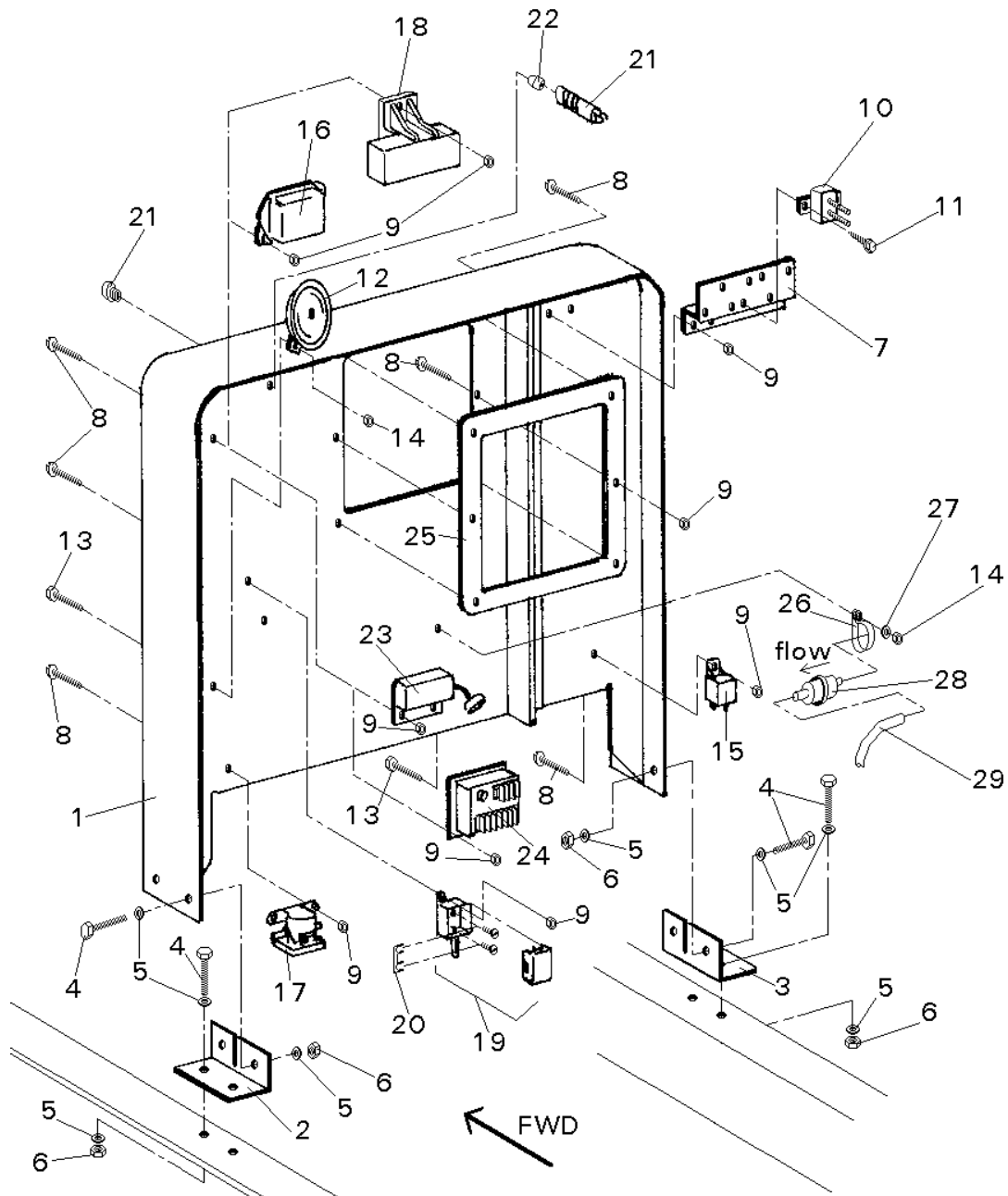
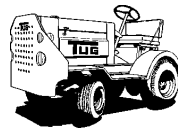


Figure 5: Firewall, Engine Side

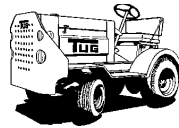


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
5-18	256	c0333023700	-----	glow plug controller	1	Note 2
5-19	256	c0321026300	-----	fuse holder	1	"
5-20	256	c0321026201	-----	fuse	1	"
5-21	256	c0322035400	-----	light socket, glow plug	1	"
5-22	256	c0322035300	-----	bulb, glow plug light	1	"
5-23	817	SCM100	T6-1300-225	protecto-start relay	1	As Req'd
5-24	gz	em2-g12	md-e05-101	Relay module, Rider safe seat	1	"
5-25	----	-----	T6-7010-324	instrument panel closeout	1	Note 3
5-26	256	d9jl-9180-b	-----	clamp, filter, transmission and reduction gear vent	1	As Req'd
5-27	----	-----	1/4	Flat washer	1	"
5-28	256	c2rz-9155-a	-----	filter, transmission and reduction gear vent	1	"
5-29	----	-----	5/16" id	hose, transmission and reduction gear vent	1	"

2. Used on tractors equipped with Cummins/Onan diesel engines.
3. Used on tractors equipped with firewall insulation only.

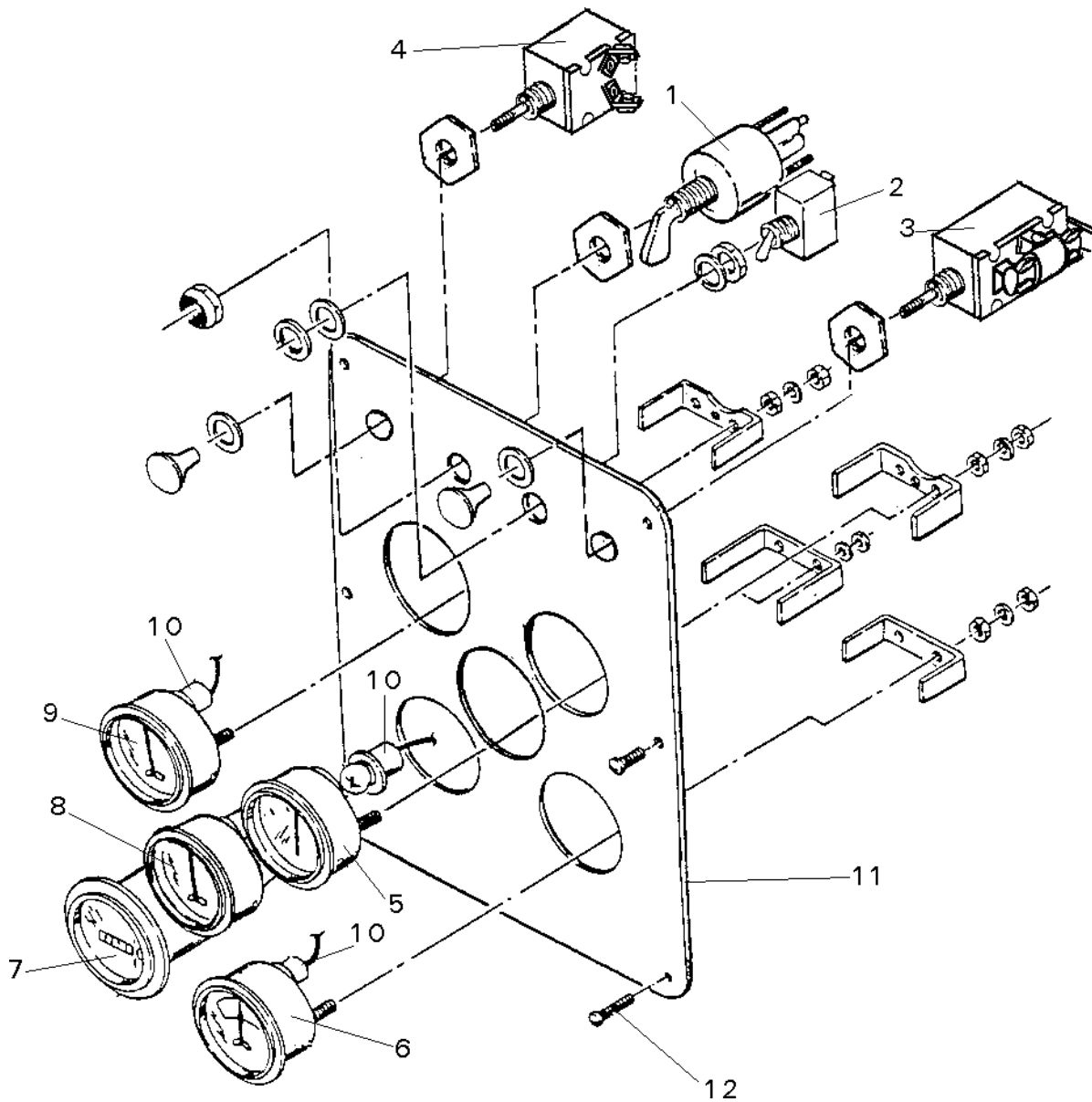
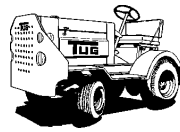


Figure 6: Instrument Panel Assembly



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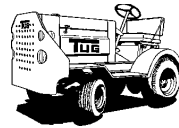


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
6-1	158	31-237	T6-7010-139	ignition switch, pollack	1	As Req'd
	----	-----	T6-7010-140	ignition switch, Cole hersee	1	"
	----	-----	T6-7010-141	ignition switch, cole hersee, with key	1	"
	----	-----	T6-7010-142	ignition switch, lansing, with key	1	"
6-	----	-----	T6-1300-107	lever, pollack ignition switch	1	"
6-	158	31-600-102	T6-1300-155	key and tumbler, used with pollack ignition switch	1	"
6-2	259	8801K22	T6-7010-113	toggle switch, headlights	1	001 & Up
6-	259	8801K22	T6-7010-113	toggle switch, work light	1	As Req'd
6-3	22	hc6385	T6-9004-107	heater switch	1	Note 1
6-4	158	35-300	T6-9003-209a	windshield wiper switch	1	"
6-5	371	104679	T6-7010-103	oil pressure gauge	1	001 & Up
6-	371	02505-04	T6-1001-133	oil pressure sensing unit	1	"
6-6	371	104603	T6-7010-131	ammeter	1	"
6-7	371	104678	T6-1300-257	hourmeter	1	"
6-8	131	SKF10130	x6017-101	fuel gauge, Gasoline and diesel	1	As Req'd
	----	-----	mg-nd-591	fuel gauge, l.p. gas	1	"
	196	82344	x6004-101	transmission oil temperature gauge	1	"
	196	82677	mh-nd-549	speedometer head	1	"
6-	----	-----	OPT-SAF-008	Kysor Shutdown System -Gas	1	As Req'd
6-	----	-----	T6-7010-207	Kysor Water Alarmstat -240 -Gas	1	"
6-	----	-----	T6-9011-327	Nipple	1	"
6-	----	-----	T6-9011-328	Tee	1	"
6-	----	-----	T6-9011-329	Adaptor	1	"
6-	----	-----	T6-1300-165	Kysor Water Alarmstat -210-Diesel	1	"
6-	----	-----	T6-4011-329	Adaptor	1	"
6-	----	-----	T6-7010-209	Kysor Oil Pressure	1	"
6-	----	-----	42-132-101	Resistor, 500 Ohm	1	"
6-	----	-----	T6-7010-300	Ignition Switch With Key	1	"
6-	----	-----	T6-7010-105	Oil Gauge	1	"
6-	----	-----	T6-7010-120	Oil/Water Pressure Warning Light	1	"
6-	----	-----	T6-7010-155	Water Temperature Gauge, Mechanical	1	"
6-	----	-----	T6-7016-123	Battery Disconnect Switch	1	"
6-	----	-----	660-4-0741-13	Vacuum Switch	1	"
6-						

Note: All instruments are supplied with mounting hardware. the remote fuel gauge is supplied with light socket and bulb.

1. Used on tractors equipped with cabs only.

2. Used on tractors equipped with firewall insulation only.

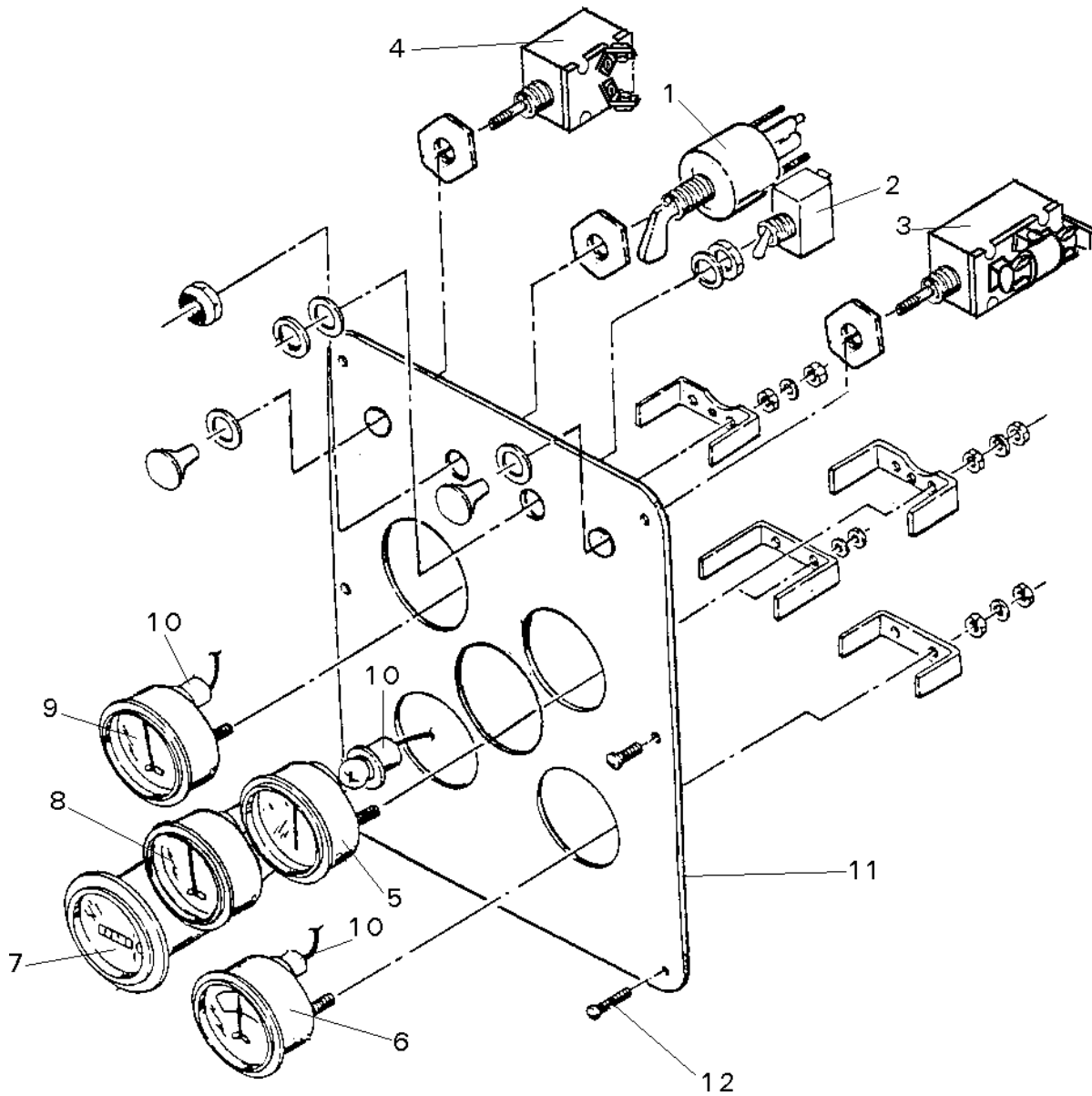
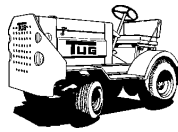


Figure 6: Instrument Panel Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
6-	131	fsa-102	x6005-101	fuel level sensing unit, gasoline and diesel	1	"
	-----	-----	mg-nd-590	fuel level sensing unit, l.p.	1	"
	196	280ec(280ee)	x6006-101	transmission oil temperature sensing unit	1	"
6-9	371	104680	T6-7010-153	water temperature gauge	1	001 & Up
6-	371	0202400	T6-1001-201	water temperature sensing unit	1	"
6-10	371	06215-00	T6-7010-129	light socket with bulb	3	"
6-	146	-----	T6-8011-111	Flange Holder	1	As Req'd
6-	146	93f3586	T6-7010-120	Red Warning Light,Flat Head	1	"
6-	146	60f1481	T6-7010-122	Green Warning Light,Flat Head	1	"
6-	146	25f1638	T6-8011-111-2	Dome Lens	1	"
6-	298	ZB2-B554	660-nd-1676	shutdown button, engine	1	"
6-	298	zb2-bz102	660-nd-1445	contact block, engine shutdown	1	"
6-11	-----	-----	T6-7010-319	instrument panel, pollack ignition switch, no fuel gauge	1	"
	-----	-----	T6-7010-323	instrument panel, cole hersee ignition switch, no fuel gauge	1	"
	-----	-----	T6-7010-321	instrument panel, with fuel gauge	1	"
	-----	-----	T6-7010-325	instrument panel, with fuel gauge and indicator lights	1	"
	-----	-----	T6-7010-335	instrument panel, with engine kill switch, fuel gauge and indicator lights	1	"
6-	-----	-----	T6-7010-326	cover, instrument panel, plexiglass	1	"
6-	293	.250idx.375od	T6-9011-237	spacer, instrument panel cover	4	"
6-12	-----	-----	#10-32nfx1"	screw	6	001 & Up
6-	-----	-----	#10-32nf	locknut	6	"
6-	-----	-----	T6-7010-324	instrument panel closeout	1	Note 2
6-	102	020-113	T6-7200-015	Water Temp Switch Hercules (Hewett)	1	As Req'd
6-	131	10020870-34	T6-1300-165	Kysor Water Alarmstat (diesel) 210	1	"
6-	131	1002-04870-240	T6-7010-207	Kysor Water Alarmstat (gas) 240	1	"
6-	131	104224900-10	T6-7010-209	Kysor Oil Pressure Stat	1	"
6-	22	ts-6471	T6-9011-115	Water Temp Sender (Hercules)	1	"
6-	74	wa 0277-1	T6-8011-117	Switch, Brake Warning	1	"
6-	-----	-----	T6-7011-105	Wiring Harness, Gas	1	"
6-	-----	-----	T6-1300-1270	Wiring, Harness, 4.236	1	"

2. Used on tractors equipped with firewall insulation only.

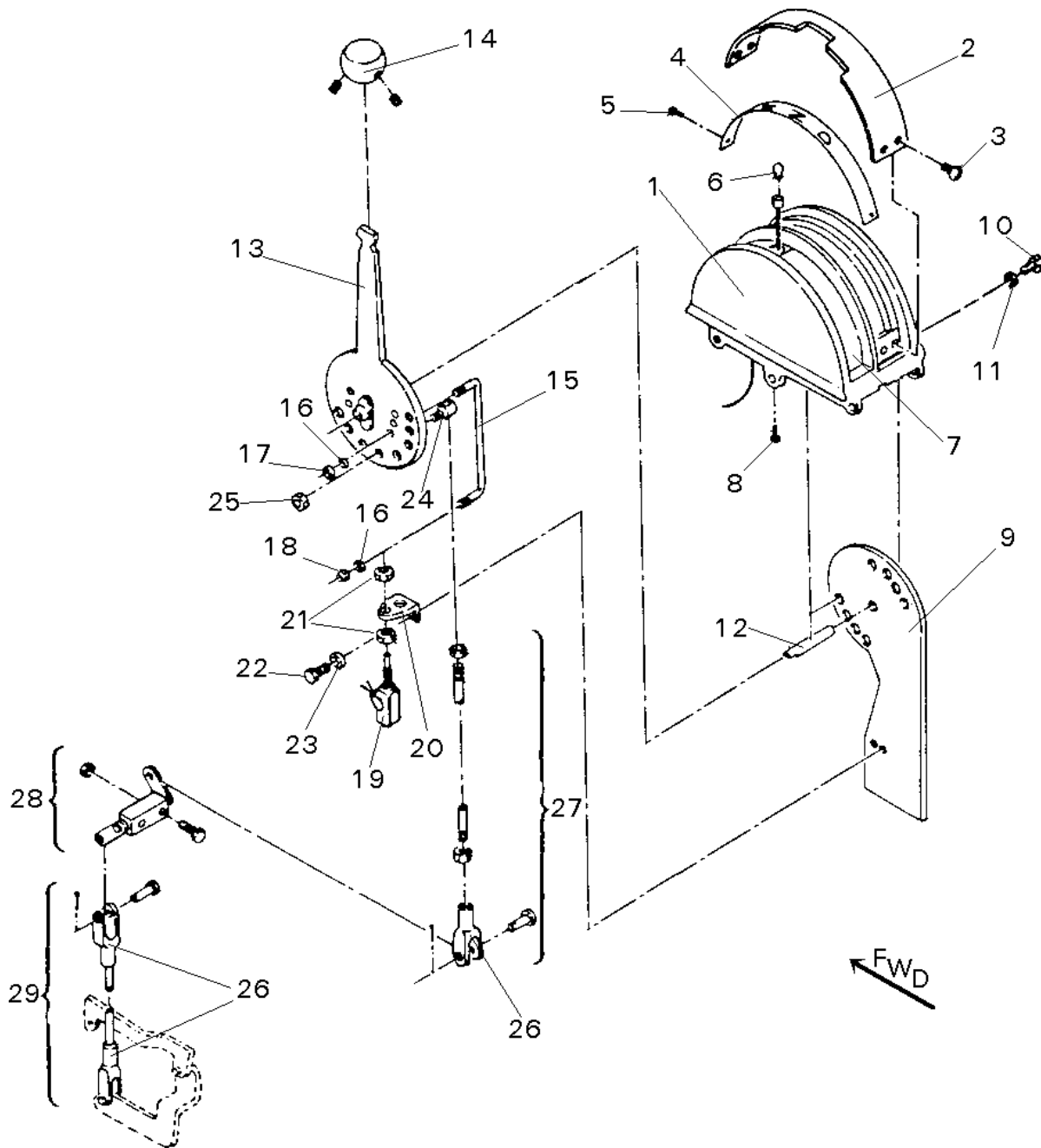
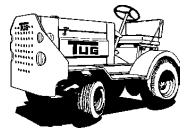


Figure 7: Morse Shifter Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
7-	140	e300911	T6-1002-151	Morse Shifter	1	Note 1
	----	-----	T6-1002-101	Morse shifter	1	001-095
7-1	140	e044405-001	T6-1002-107	housing	1	Note 2
7-2	140	b044724	T6-1002-103	Gate Plate, shifter	1	"
7-3	----	-----	#10-24ncx5/16"	Phillips truss head screw	4	"
7-4	140	b300144-002	T6-1002-105	Decal strip, Shifter	1	"
7-	140	b44406	T6-1002-131	Light Pipe, shifter	1	"
7-5	----	-----	#6-32ncx7/16"	Phillips head truss screw	2	"
7-6	----	-----	T6-1002-129	Pigtail Assembly	1	"
7-	----	-----	T6-1002-135	shim	1	"
7-7	----	-----	T6-1002-133	reflector strip	2	"
7-8	----	-----	#10-24ncx1/2"	screw	1	"
7-9	----	-----	T6-1002-141	Plate, Hanger	1	Note 1
	----	-----	T6-1002-113	plate, hanger	1	001-095
7-10	----	-----	3/8-24nfx3/4"	Allen head bolt	2	Note 2
7-11	----	-----	3/8	lock washer	2	"
7-12	----	-----	T6-1002-115	shaft, lever	1	"
7-13	140	300140	T6-1002-139	shifter lever, Morse	1	Note 1
	----	-----	T6-1002-111	shifter lever, Morse	1	001-095
7-14	140	a68444	T6-1002-137	knob, shifter	1	Note 1
	----	-----	T6-1002-109	knob, shifter (Split)	1	001-095
	----	-----	5/16-18ncx3/8"	Phillips head bolt	1	"
	----	-----	5/16-18nc	nut	1	"
7-15	----	B 048353	T6-1002-145	Arm, switch actuator	1	Note 1
	140	b43681	T6-1002-119	Arm, switch actuator	1	001-095
7-16	----	-----	T6-1002-123	O-ring	2	Note 2
7-17	----	-----	#10-32nf	fiber locknut	1	"
7-18	----	-----	#10-32nf	locknut	1	"
7-19	140	301527	T6-1002-147	switch, neutral start	1	"
7-20	----	-----	T6-1002-127	switch support	1	"
7-21	----	-----	T6-1002-125	nut, switch	2	"
7-	----	-----	T6-1002-247	Switch, Safety (red)	1	"

1. Used on all units equipped with Morse shifters from serial number 096.
2. Used un all units equipped with Morse shifters

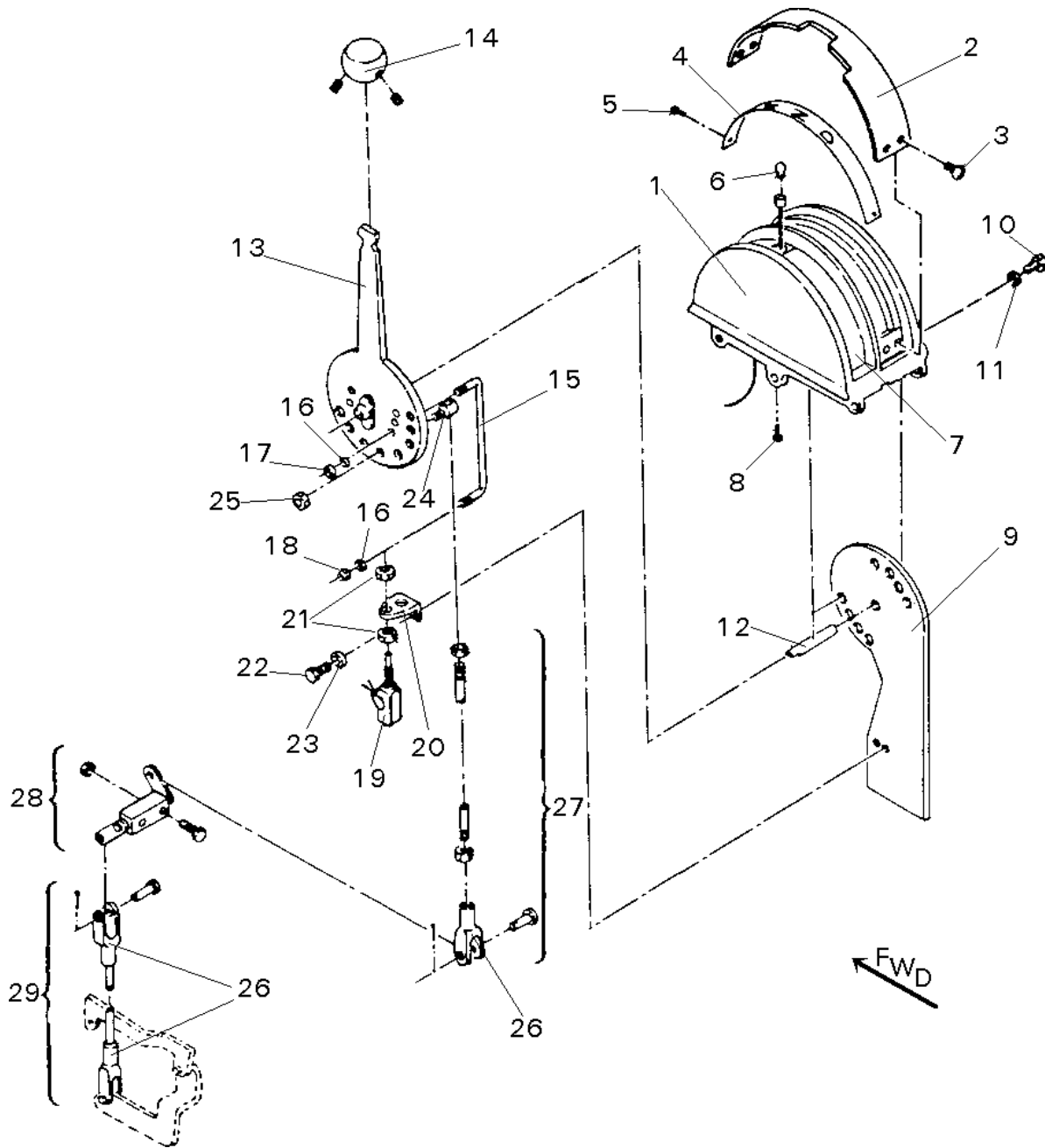
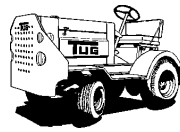


Figure 7: Morse Shifter Assembly

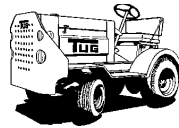


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
7-22	-----	-----	1/4-20ncx1/2"	hex head bolt	2	Note 2
7-23	-----	-----	1/4	Lock Washer	2	"
7-24	140	b44720	660-4-0732-9	swivel, shift cable	1	"
7-25	-----	-----	5/16-24nf	locknut	1	"
7-26	-----	-----	T6-1004-109	yoke assembly, shifter linkage rod (note 3)	3	001-361
7-27	-----	-----	T6-1004-105	rod assembly, long (note 3)	1	"
7-28	-----	-----	T6-1004-103	bell crank assembly (note 3)	1	"
7-29	-----	-----	T6-1004-104	rod assembly, short (note 3)	1	"
7-	140	304242-003-0035	T6-1023-105	cable, shifter, 35", gas (note 3)	1	As Req'd
7-	140	304242-003-0032	T6-1023-103	cable, shifter, 32", diesel (note 3)	1	"
7-	-----	-----	T6-9000-101	Safety Interlock Kit	1	"

1. Used on all units equipped with Morse shifters from serial number 096.

2. Used on all units equipped with Morse shifters.

3. 35-inch shifter cable T6-1023-105 (for gasoline) or 32-inch shifter cable T6-1023 103 (for diesel) replaces shifter linkage rod yoke assembly T6-1004-109 (item 26), long rod assembly T6-1004-105 (item 27), bell crank assembly T6-1004-103 (item 28) and short rod assembly T6-1004-104 (item 29) used as original equipment through serial number 361.

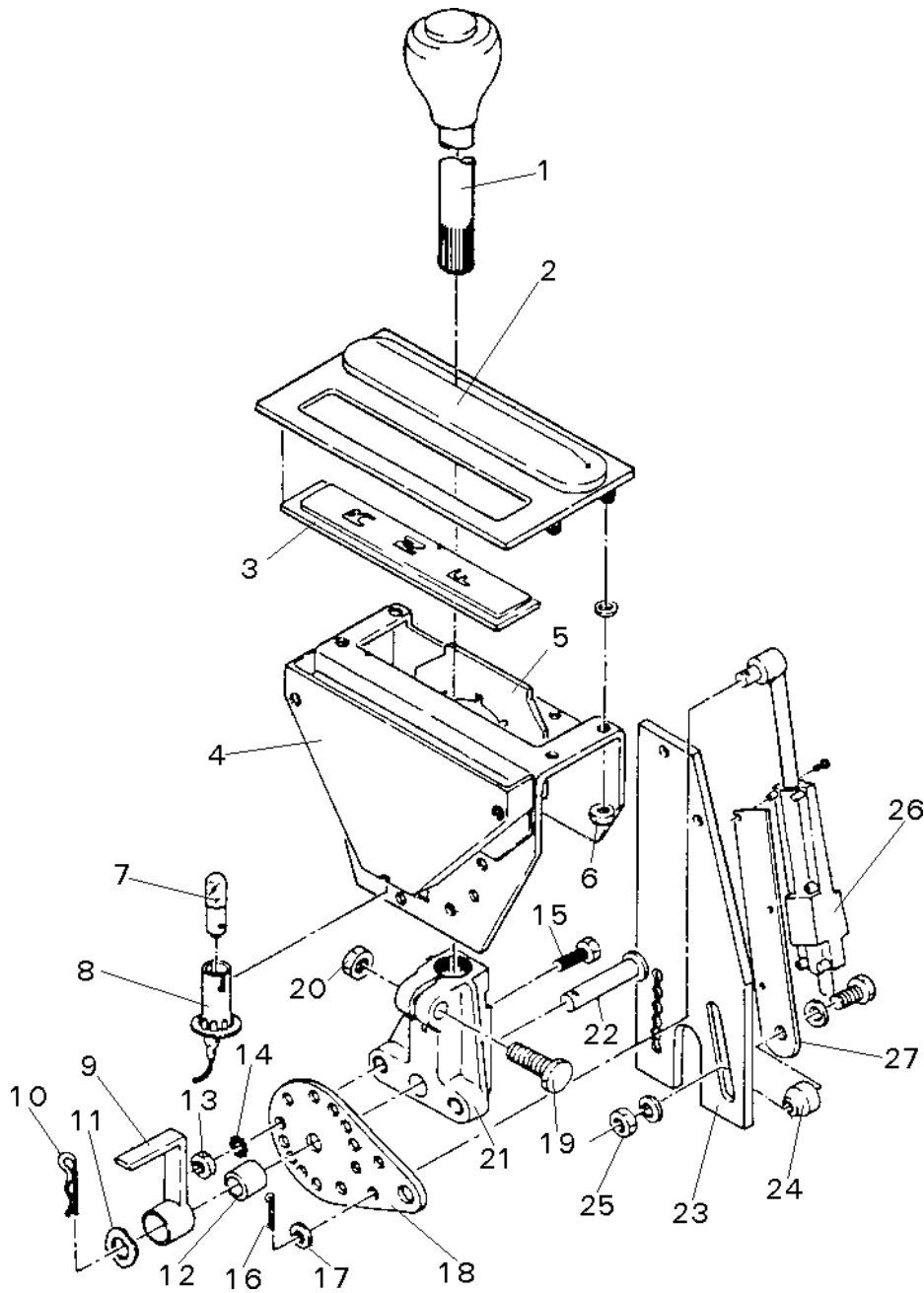
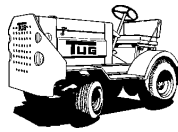


Figure 8: Quadrastat Shifter Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
8-	162	t37001	T6-1002-153	Quadrastat Shifter	1	As Req'd
	-----	-----	T6-1002-153m	quadrastat shifter, full range	1	"
8-1	162	da581	T6-1010-105k	handle assembly kit	1	Note 1
8-2	-----	-----	T6-1010-107	dust cover (not available)	1	"
8-3	-----	-----	T6-1010-111	Position panel	1	As Req'd
	162	dtp-037	mj-nd-1010	Position panel, full range	1	"
8-4	162	dy-1827	T6-1010-113	housing assembly	1	Note 1
8-5	162	dy16520-1	T6-1010-109	gate plate	1	As Req'd
	162	dtz-008	mj-nd-1009	gate plate, full range	1	"
8-6	-----	-----	T6-1010-157	nut and washer	4	Note 1
8-7	-----	-----	T6-1010-115	indicator bulb	1	"
8-8	-----	-----	T6-1010-117	bulb socket	1	"
8-9	162	dz953	T6-1010-119	position indicator	1	"
8-10	-----	-----	T6-1010-121	keeper	1	"
8-11	-----	-----	T6-1010-123	wave washer	1	"
8-12	-----	-----	T6-1010-125	spacer bushing	1	"
8-13	-----	-----	T6-1010-127	Nut	1	"
8-14	-----	-----	T6-1010-129	star washer	1	"
8-15	-----	-----	T6-1010-131	hex head bolt	1	"
8-16	-----	-----	T6-1010-133	cotter pin	1	"
8-17	-----	-----	T6-1010-135	washer	1	"
8-18	-----	-----	T6-1010-137	output plate	1	"
8-19	-----	-----	T6-1010-139	bolt	1	"
8-20	-----	-----	T6-1010-141	nut	1	"
8-21	162	da-581	T6-1010-143	trunnion (Note 2)	1	"
8-22	-----	-----	T6-1010-145	clevis pin	1	"
8-23	-----	-----	T6-1010-147	switch support plate	1	"
8-24	-----	-----	T6-1010-149	pivot spacer	1	"
8-25	-----	-----	T6-1010-151	nut, washer and bolt	1	"
8-26	162	t-308	T6-1010-153	neutral start switch	1	"
8-27	-----	-----	T6-1010-155	switch assembly plate	1	"

1. Used on all units equipped with Quadrastat shifters.

2. Not available separately. Included with item 8-1.

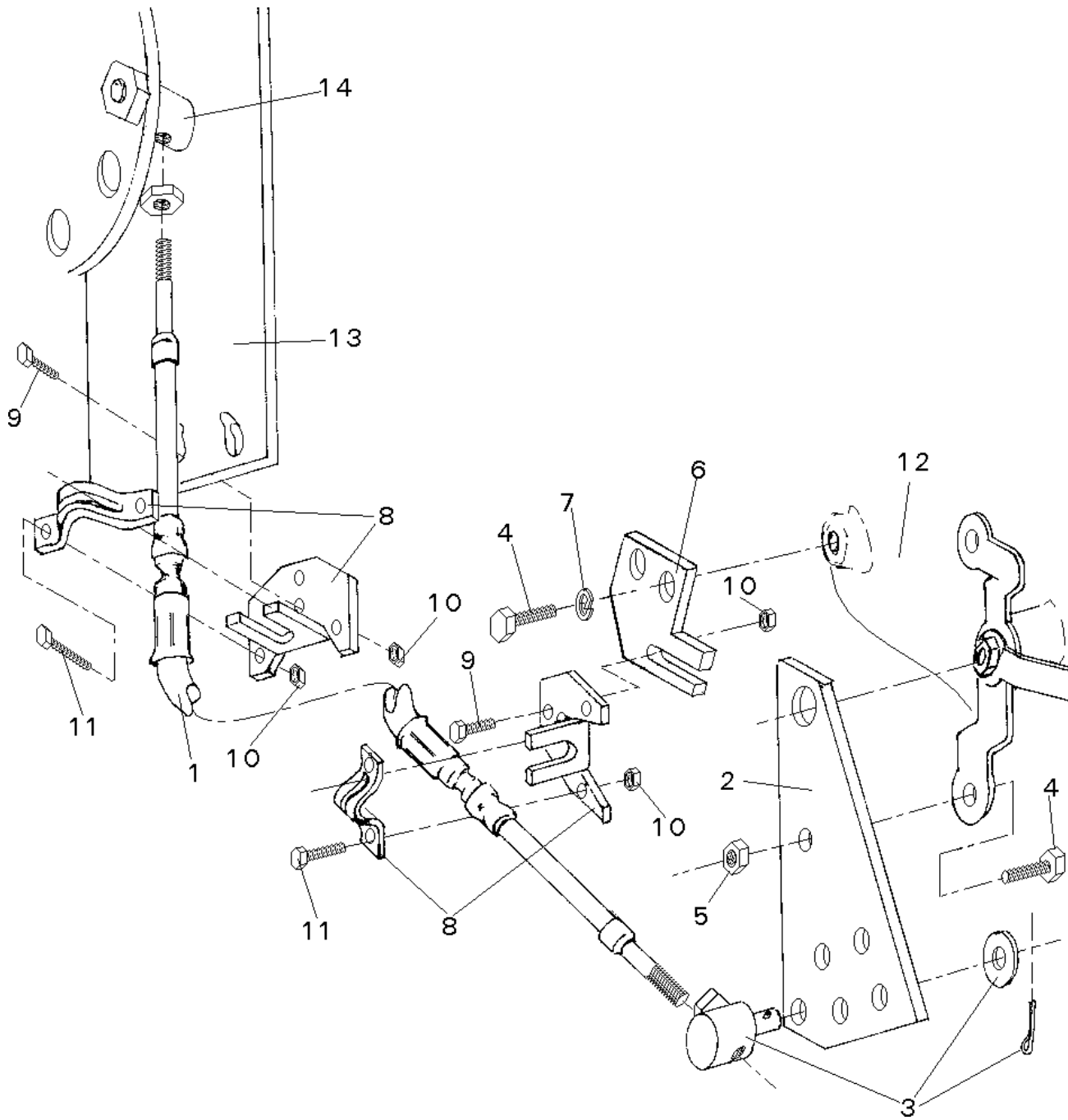
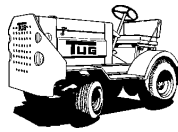


Figure 9: Transmission Shifter Linkage Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
9-1	140	304242-003-0035	T6-1023-105	cable, shifter, 35", gas (note 1)	1	As Req'd
	140	304242-003-0032	T6-1023-103	cable, shifter, 32", diesel (note 1))	1	"
	-----	-----	T6-1004-105	rod, long (note 1)	1	001-361
	-----	-----	T6-1004-103	bell crank assembly (note 1)	1	"
	-----	-----	T6-1004-104	rod, short (note 1)	1	"
	-----	-----	T6-1004-109	yoke assembly (note 1)	3	"
9-2	-----	-----	T6-1021-103	Shifter Linkage plate	1	001 & Up
9-3	162	dr50-2	T6-1004-119	swivel, shift cable	1	"
9-4	-----	-----	3/8-16ncx1"	hex head bolt	2	"
9-5	-----	-----	3/8-16nc	locknut	1	"
9-6	-----	-----	T6-1021-107	anchor, cable, standard shifter	1	"
9-7	-----	-----	3/8	lock Washer	1	"
9-8	162	q10-272	T6-1002-155	cable clamp	2	"
9-9	-----	-----	1/4-20ncx1/2"	hex head bolt	3	"
9-10	-----	-----	1/4-20nc	locknut	7	"
9-11	-----	-----	1/4-20ncx1"	hex head bolt	4	"
9-12	-----	-----	T6-1001-101t	transmission, gas (note 2)	1	362 & Up
	246	F2FP-7000GA	T6-1008-111	transmission, c-6 3-speed	1	"
9-13	140	e300911	T6-1002-151	Morse Shifter	1	Note 3
	-----	-----	T6-1002-101	Morse shifter (Obsolete -use T6-1002-151)	1	Note 4
	162	t37001	T6-1002-153	Quadrastat Shifter	1	As Req'd
	-----	-----	T6-1002-153m	Quadrastat Shifter, full Range	1	"
9-14	162	dr50-2	T6-1004-119	swivel, shifter	1	"

- 35" shifter cable T6-1023-105 (gas) or 32" shifter cable T6-1023 103 (diesel) replaces assemblies T6-1004-109, T6-1004-105, T6-1004-103 and T6-1004-104 used as original equipment through serial number 361.
- FMX transmission (original equipment through serial number 361) is no longer available. Replace with 2-speed transmission T6-1001-101T (gas) or 3-speed transmission T6-1008-111 (diesel). This requires replacement of 240 CID engine with 300 CID engine and replacement of mounts.
- Used on all units equipped with Morse shifter from serial number 096.
- Used on all units equipped with Morse shifter through serial number 095.

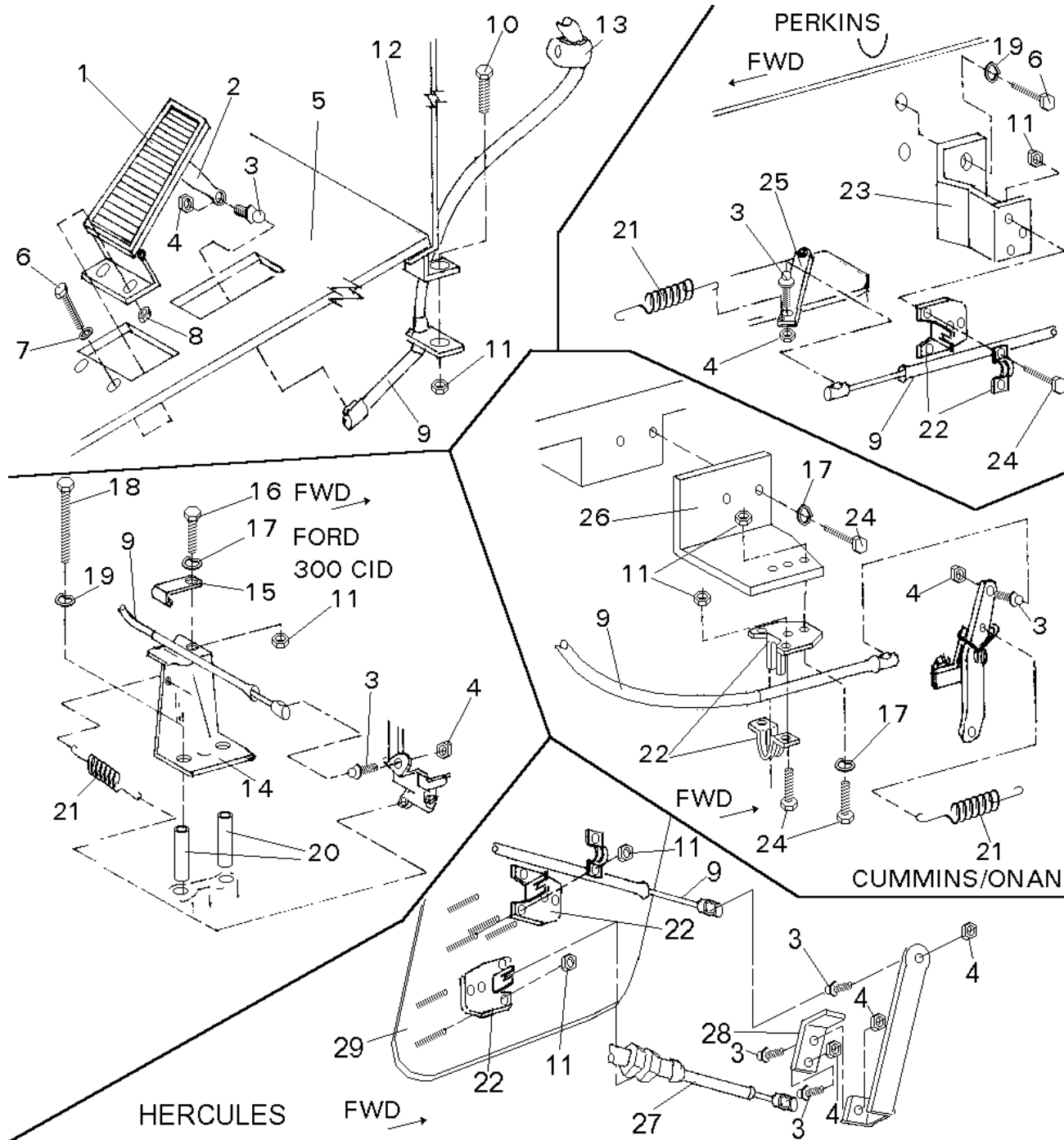
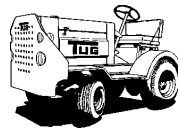


Figure 10: Accelerator Cable and Linkage Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
10-1	246	eohz-9735c	T6-1009-103	Accelerator Pedal	1	001 & Up
10-	----	-----	T6-1009-104	Cap, morton cast, accelerator pedal	1	As Req'd
10-2	----	-----	T6-1009-113	Arm, Accelerator Pedal	1	001 & Up
10-3	79	89831	T6-1009-109	stud, accelerator cable	Ref.	"
10-4	----	-----	#10-32nf	Locknut (Note 1)	Ref.	"
10-5	----	-----	T6-4021-105	floorboard, 45°	1	001-361
	----	-----	T6-4048-103	floorboard, one-piece, gas	1	362-3344
	----	-----	T6-4048-107	floorboard, one-piece, Diesel	1	"
	----	-----	T6-4048-103/7	floorboard, universal	1	3345 & Up
10-6	----	-----	3/8-16ncx1"	hex head bolt	Ref.	001 & Up
10-7	----	-----	3/8	flat washer	2	"
10-8	----	-----	3/8-16nc	locknut	2	"
10-9	256	epgc6tz-9a758e	T6-1009-105	accelerator cable	1	"
10-10	----	-----	1/4-20ncx1"	hex head bolt	1	"
10-11	----	-----	1/4-20nc	locknut	Ref.	"
10-12	----	-----	T6-4004-103	firewall	1	"
10-13	79	86082	T6-500-138	P-clamp	1	"
10-14	256	c8uz-9723d	T6-1001-119	accelerator cable stand-off, Gas	1	As Req'd
10-15	256	epgc5tz-9792a	T6-1001-119c	clip, accelerator cable stand-off, gas	1	"
10-16	----	-----	1/4-20ncx1/2"	hex head bolt	1	"
10-17	----	-----	1/4	lock washer	1	"
10-18	----	-----	3/8-16ncx3"	hex head bolt	2	"
10-19	----	-----	3/8	lock washer	Ref.	"
10-20	256	epgc5tz-9k706d	T6-1001-121	spacer, accelerator cable stand-off, gas	2	"
10-21	----	-----	T6-1001-123	accelerator spring	1	001 & Up
10-22	162	q10-272	T6-1002-155	cable clamp, diesel	Ref.	As Req'd

1. Accelerator cable stud T6-1009-109 (item 3) may be welded in certain applications, eliminating the need for #10-32NF locknut (item 4).

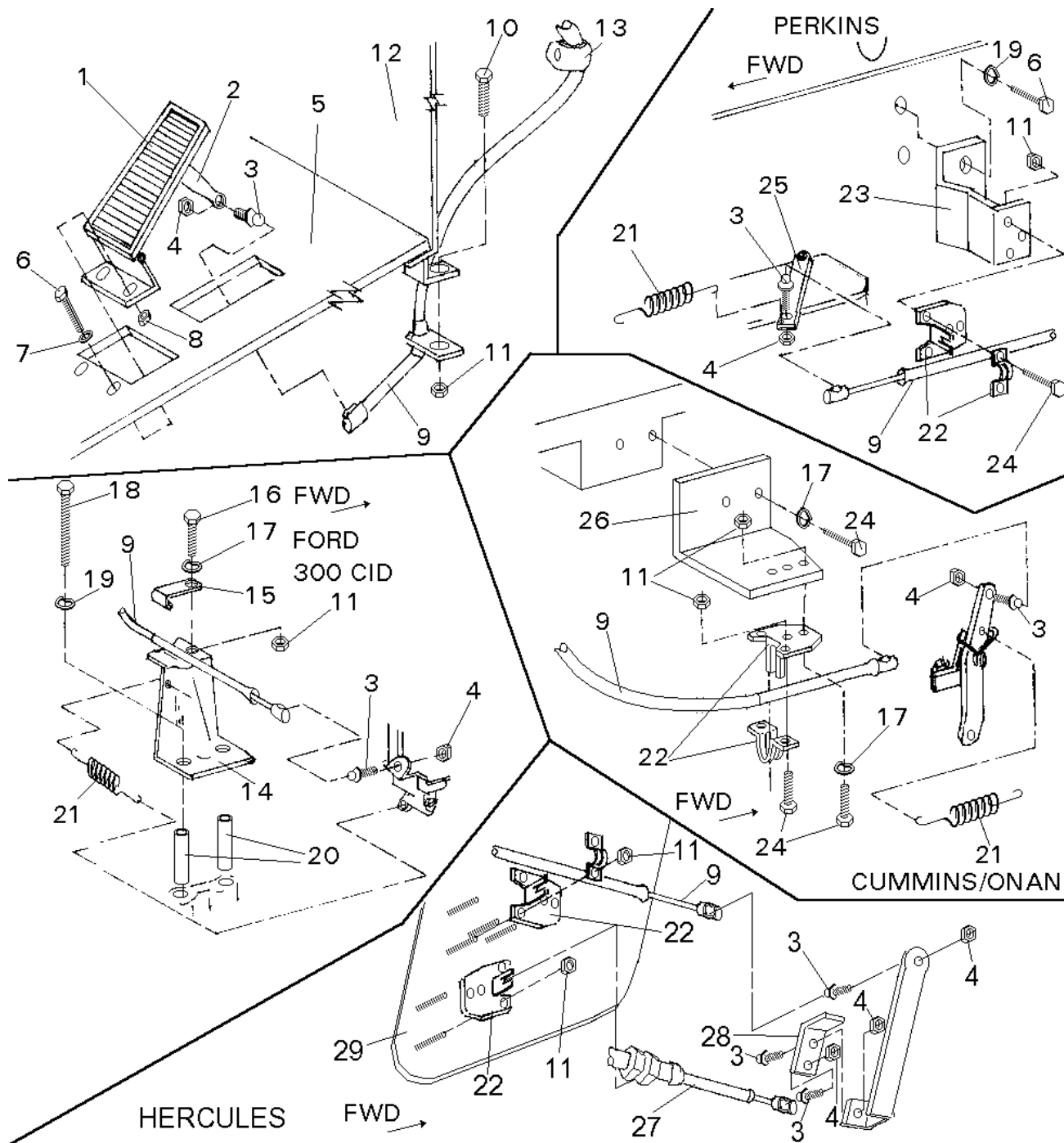
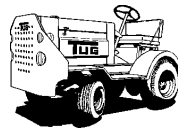


Figure 10: Accelerator Cable and Linkage Assembly

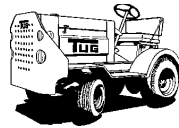
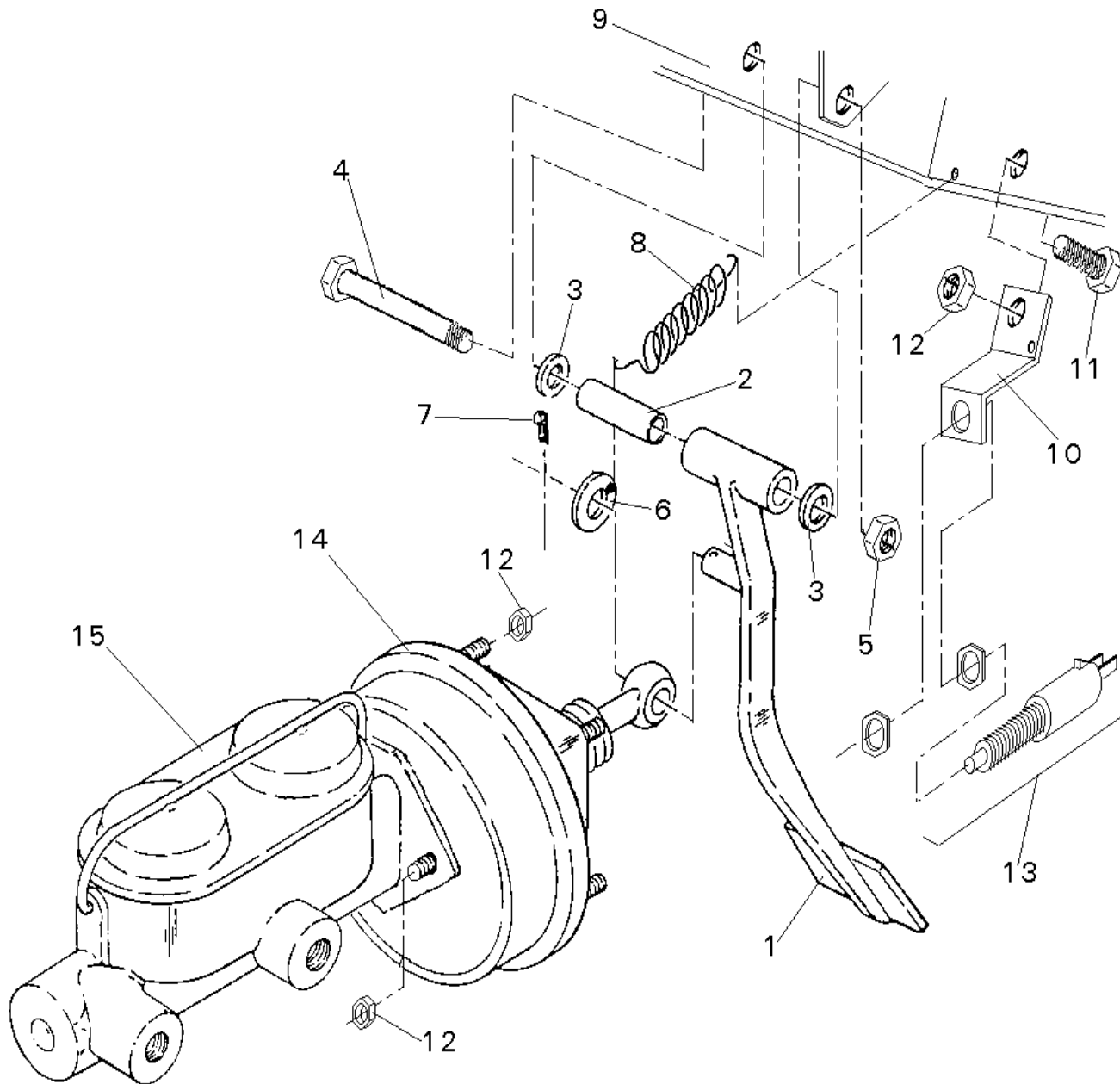
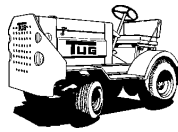


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
10-23	----	-----	T6-1209-111	accelerator cable stand-off, (perkins)	1	As Req'd
10-24	----	-----	1/4-20ncx1-1/2"	hex head bolt	Ref.	"
10-25	----	-----	T6-1209-109	throttle arm, (perkins)	1	"
10-26	----	-----	T6-3200-105	accelerator cable stand-off, (cummins/onan)	1	"
10-27	70	2180-90"	660-1-1264	transmission manual modulator cable	1	"
10-28	----	-----	T6-7200-080	throttle lever	1	"
10-29	----	-----	T6-7200-085	throttle linkage plate	1	"



**Figure 11:Brake Pedal, Booster
and Master Cylinder Assembly**

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
11-1	----	-----	T6-8006-103	Brake pedal	1	Note 1
	----	-----	T6-8106-107	brake pedal	1	362 & Up
11-2	141	ep812-24	T6-8006-105	bushing, brake pedal	2	001 & up
11-3	----	-----	3/8	flat washer (shim)	Ref.	001-248
	----	-----	1/2	flat washer (shim)	Ref.	249 & Up
11-4	----	-----	3/8-24nfx4-1/2"	hex head bolt	1	001-248
	----	-----	1/2-13ncx5"	hex head bolt	1	249 & Up
11-5	----	-----	3-8-24nf	locknut	1	001-248
	----	-----	1/2-13nc	locknut	1	249 & Up
11-6	----	-----	T6-5005-129	brake pedal booster retaining washer	1	001 & Up
11-7	----	-----	1/8x1"	cotter pin	1	"
11-8	----	-----	T6-1001-123	return spring	1	"
11-9	----	-----	T6-5005-121	Bracket, Steering Column, upper	1	"
11-10	----	-----	T6-5005-119	bracket, stoplight switch	1	128 & Up
	----	-----	T6-6001-105	adapter, stoplight switch	1	001-127
11-11	----	-----	3/8-16ncx2"	hex head bolt	1	"
11-12	----	-----	3/8-16nc	locknut	Ref.	"
11-13	79	41392	T6-7006-105	switch, stoplight	1	128 & Up
	----	-----	T6-7006-103	switch, stoplight	1	001-127
11-14	50	2513664	T6-8007-101	Booster, brake, vacuum	1	Note 1
11-	----	-----	T6-8007-101k	Retrofit kit, brake pedal and booster	1	Note 1
11-	----	-----	T6-8007-101C	Check Valve	1	"
11-15	127	f36706	md-cb1-121	master cylinder, single	1	001-127
	----	-----	T6-6001-113	master cylinder, dual, rear disc brakes only	1	128 & Up
	gu	1779	T6-6001-113cv	master cylinder, dual, front drum brakes	1	"
11-	----	-----	T6-3200-117	heat shield, brake booster	1	As Req'd
11-	127	22749	T6-6001-109	rebuild kit, dual master cylinder	1	"

1. Brake booster provided as original equipment on tractors prior to serial number 362 is no longer available. Replacement of this booster requires retrofit kit number T6-8007-101K which includes booster T6-8007-101 (item 14) and brake pedal T6-8106-107. This change also requires replacement of single master cylinder MD-CB1-121 with dual master cylinder T6-6001-113, and installation of stoplight switch bracket T6-5005-119 and stoplight switch T6-7006-105.

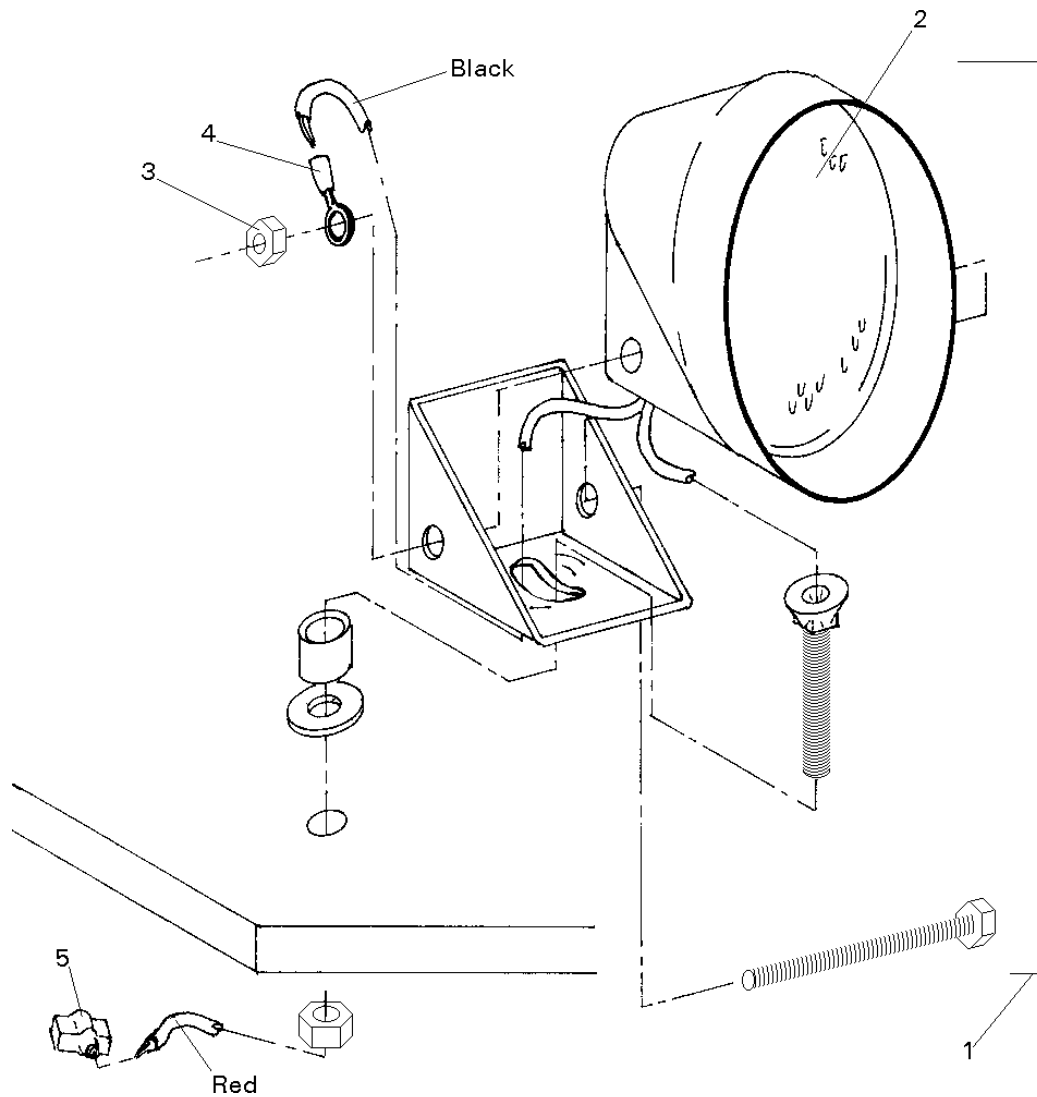
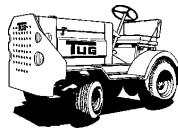


Figure 12: Headlight Assembly

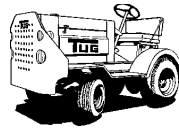
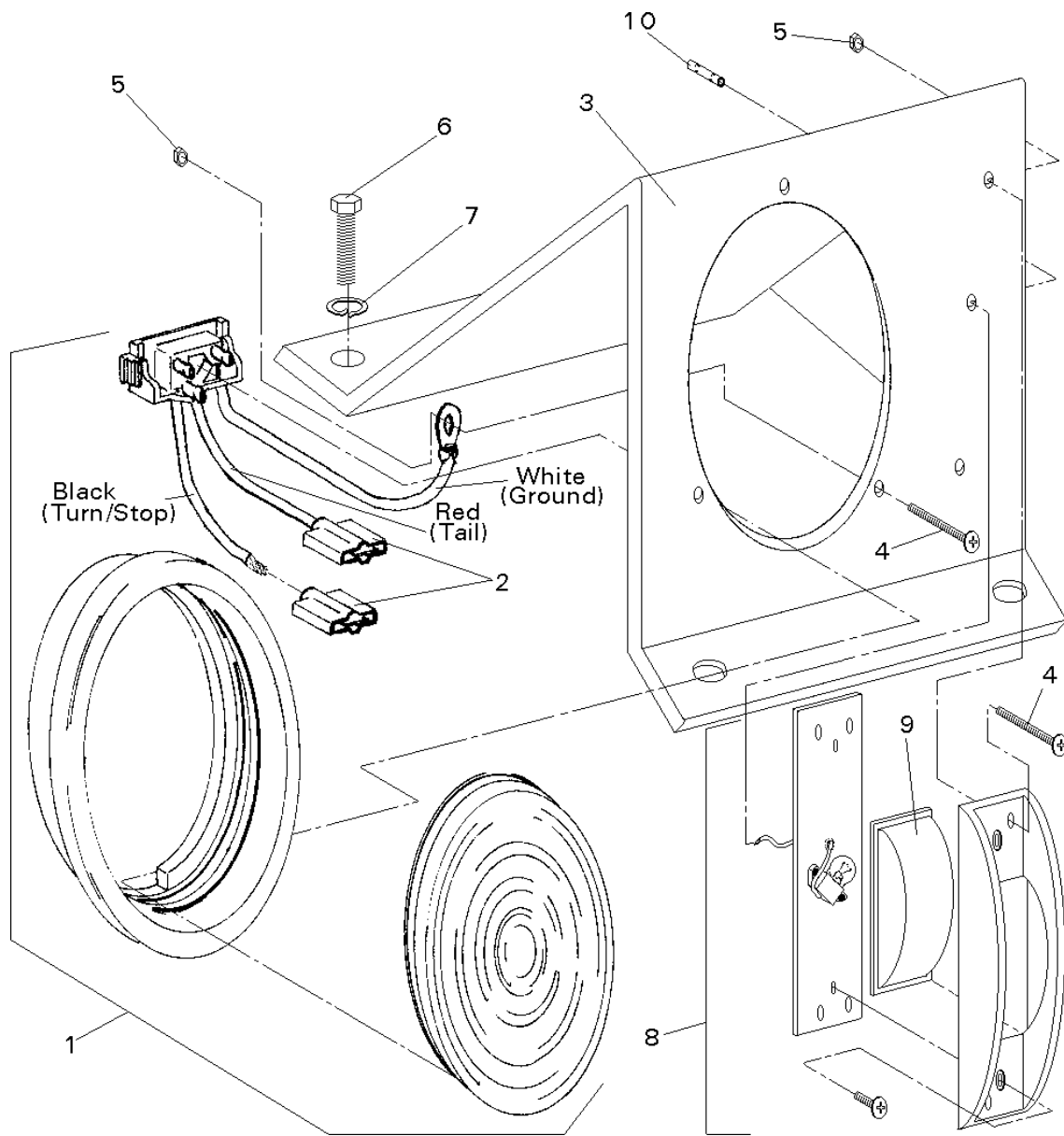
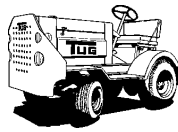


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
12-1	187	1400342	T6-1300-247	Headlight Assembly	2	Note 1
12-2	187	4929190	T6-1300-247b	Sealed Beam, Halogen	2	"
12-3	----	-----	1/4-20nc	Locknut	2	"
12-4	56	852145	-----	ring connector	2	001 & Up
12-5	56	634005	-----	male connector, quick disconnect	2	"
12-	----	805000	T6-1300-248	Headlight Assembly, Betts (UPS)	2	As Req'd

1. Headlight Assembly T6-1300-247 (item 1) is provided as original equipment on units from serial number 4806. Sealed beam T6-1300-247B (item 2) is not interchangeable with original equipment on units 001 through 4805. Replacement of sealed beam on units 001 through 4805 requires replacement of headlight assembly with item 1. Item 2 is included in item 1 or is available separately.



**Figure 13: Tail Light/Stop Light
and Back Up Light Assembly**

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
13-1	213	40042r	T6-7006-101a	tail/stop light kit, plastic	Ref.	As Req'd
	155	m413-3	T6-7006-101	tail/stop light assembly, steel frame (note 1)	Ref.	"
13-	22	1157	-----	bulb, double filament, steel frame light	*1	"
13-2	56	634005	-----	male connector, quick disconnect	*2	001 & Up
13-	213	426ka	T6-7006-115	rear turn signal	2	As Req'd
13-3	----	-----	T6-7017-102	stop light bracket, rh (non-cab only)	1	"
	----	-----	T6-7017-101	stop light bracket, lh (non-cab only)	1	"
13-	----	-----	T6-9011-340	turn signal box, roof mount (cab only)	2	"
13-4	----	-----	#10-32nfx1"	screw	Ref.	"
13-5	----	-----	#10-32nf	locknut	Ref.	"
13-6	----	-----	3/8-16ncx3/4"	Hex Head bolt	8	"
13-7	----	-----	3/8	lock washer	8	"
13-8	155	m124a	T6-7006-107	armored light (note 2)	2	"
	213	40004	T6-7006-107a	back-up light kit, plastic	2	"
13-9	22	680-2125	T6-7006-109	lens, back-up light, armored	2	"
	213	414-15c	x6021-101	lens, backup-light, steel frame (note 3)	2	"
13-10	56	42205	-----	connector	2	"
13-	----	-----	T6-7018-101	L/H Tail/Backup Brkt	2	101 & Up
13-	----	-----	T6-7018-102	R/H Tail/Backup Brkt	2	"

1. Steel frame tail/stop light assembly T6-7006-101 does not include double filament bulb 1157.
2. Armored light T6-7006-107 does not include lens T6-7006-109.
3. Back-up light lens X6021-101 is used with steel frame tail/stop light assembly T6-7006-101 to provide steel frame back-up light.

* Quantity shown is for one assembly.

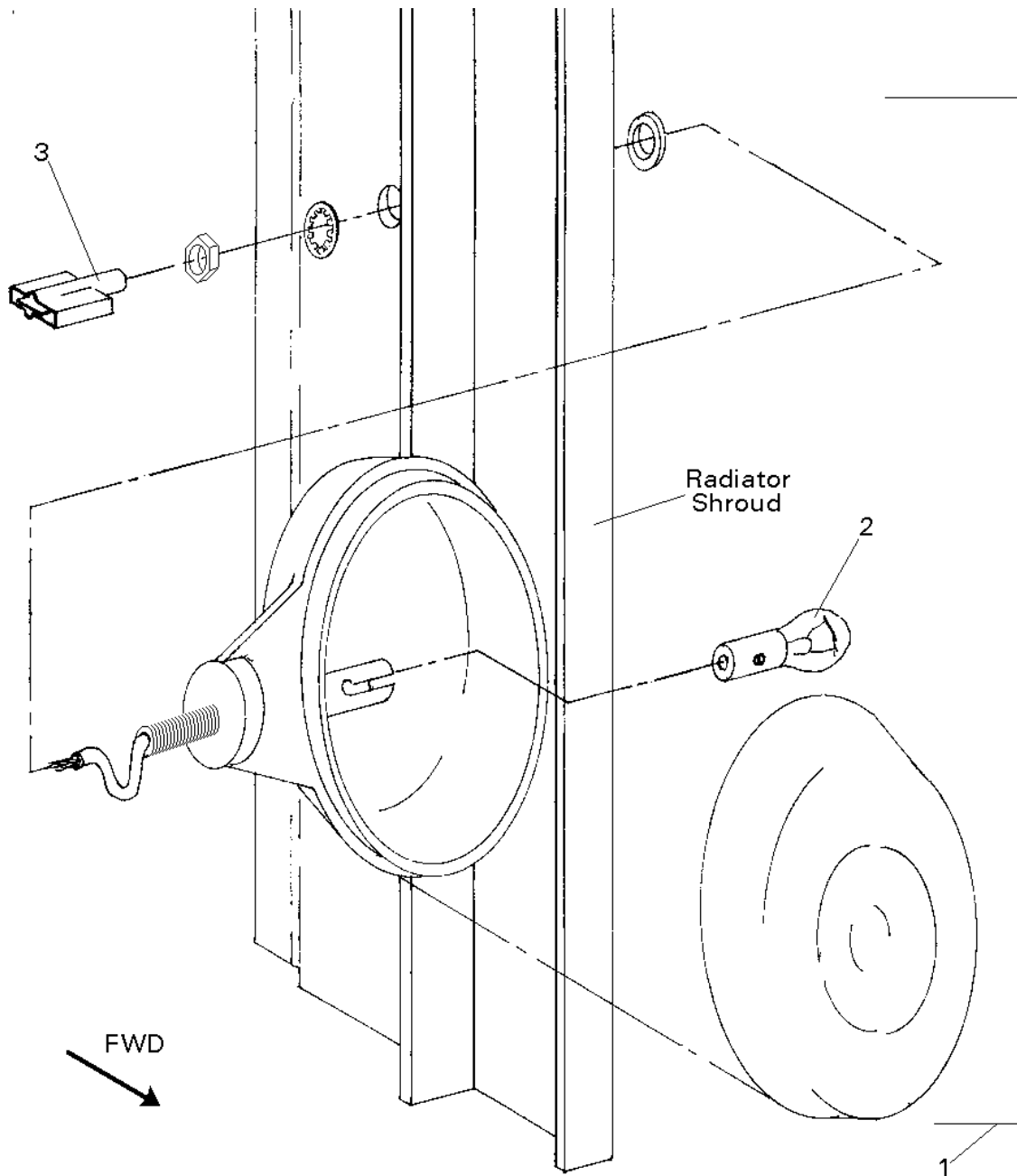
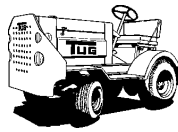


Figure 14: Front Turn Signal Assembly

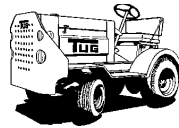


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
14-1	297	3753AD	T6-7007-103	Light, Turn Signal on Post	2	As Req'd
14-2	22	1156	-----	bulb single filament	2	"
14-3	56	634005	-----	male connector, quick disconnect	2	"
14-	----	-----	T6-4003-115	Reflector Mounting Bracket	2	"
14-	----	-----	T6-7008-103B	Amber Lens	2	"
14-	----	-----	T6-5001-101	Reflector, Amber -Round	2	"

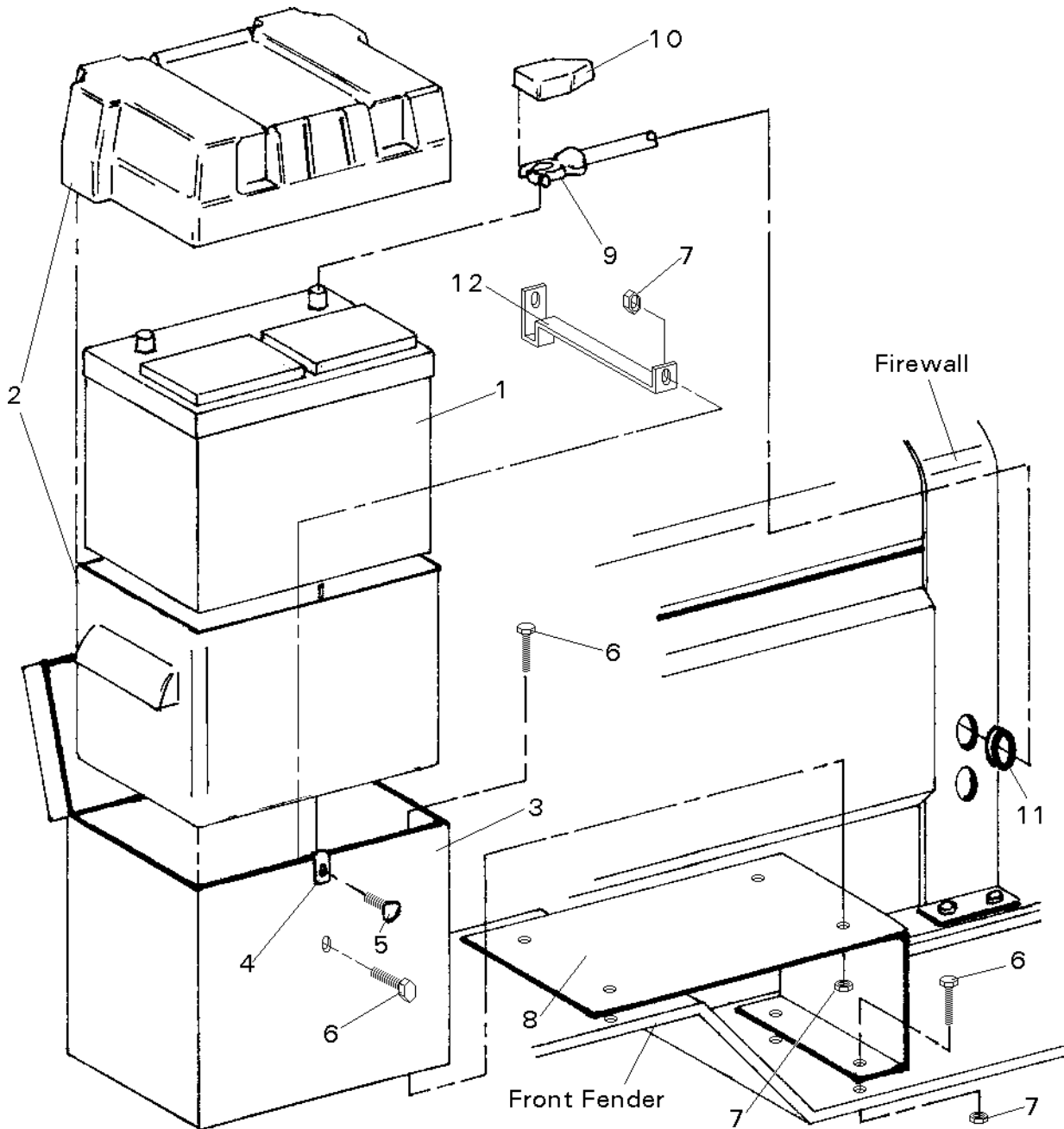
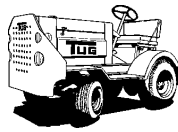


Figure 15: Battery and Battery Box Installation



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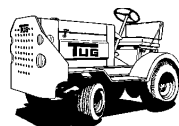
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Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
15-1	380	24f-50	T6-7001-103	battery, group 24	1	As Req'd
	380	27fxhd	T6-7001-205	battery, group 27	1	"
	380	a31-900	T6-7001-105	battery, group 31	1	"
	127	1150	T6-9011-235	delco battery, group 31c (threaded posts)	1	"
	380	com-4d	x6007-201	battery 4d	1	"
15-2	17	9065	T6-4019-101	liner, battery box, group 24 battery	1	"
	17	9067	T6-1212-102	liner, battery box, group 27/31/31c battery 16"	1	"
15-3	----	-----	T6-4018-103	battery box, 16" Long, group 24/27/31/31c battery	1	"
	----	-----	T6-4018-103s	battery box, 13-1/2" Long group 24 battery	1	"
	----	-----	T6-3200-125	battery box, 4d	1	"
	----	-----	T6-4018-117	battery box, two batteries	1	"
15-4	79	86782	T6-4006-119	tinnerman fastener	1	001 & Up
15-5	204	1/4-20ncx1"	T6-4018-115	thumb screw	1	"
15-	373	wj-202	T6-4018-119	rubber latch, battery box	1	As Req'd
15-6	----	-----	1/4-20ncx1"	hex head bolt	Ref.	001 & Up
15-7	----	-----	1/4-20nc	locknut	Ref.	"
15-8	----	-----	T6-4018-113	battery stand, short	1	"
15-	----	-----	T6-4019-113	battery stand, long	1	"
15-9	----	-----	660-1-1309	battery cable, black, group 24/27/31/4d battery	1	As Req'd
	----	-----	T6-7016-121	battery cable, black, group 31c battery	1	"
15-	----	-----	T6-7016-115	battery cable, red, group 24/27/31/4d battery, lh mounted	1	"
	----	-----	T6-7016-117	battery cable, red, group 31c battery, lh mounted	1	"
	----	-----	T6-7016-119	battery cable, red, group 24/27/31/4d battery, rh mounted	1	"
	----	-----	mg-1-543	battery cable, red, group 31c battery, rh mounted	1	"
15-	56	370-10-4-3blk	T6-7016-105	cable, ground	1	001 & Up
15-	56	370-20-4-3red	T6-7016-111r	cable, relay to starter, gas	1	As Req'd
15-10	----	-----	T6-9011-344	battery terminal cover, plastic	2	"
	----	-----	T6-9011-343	battery terminal boot, rubber	2	"
15-11	144	2870-26012	T6-500-108	grommet, battery cable, rubber	2	001 & Up
15-12	----	-----	T6-4018-121	battery hold down bar, group 24/27/31/31c	1	As Req'd
	----	-----	T6-9011-351	battery hold down bar, 4d	1	"
	79	89652/31346	T6-9011-101	battery hold down bracket, kit, group 24/27/31/31c	1	"
	----	-----	T6-7016-123	Battery Disconnect Switch	1	"
	----	-----	T6-7016-101	38" Battery Cable (Delta)	1	"

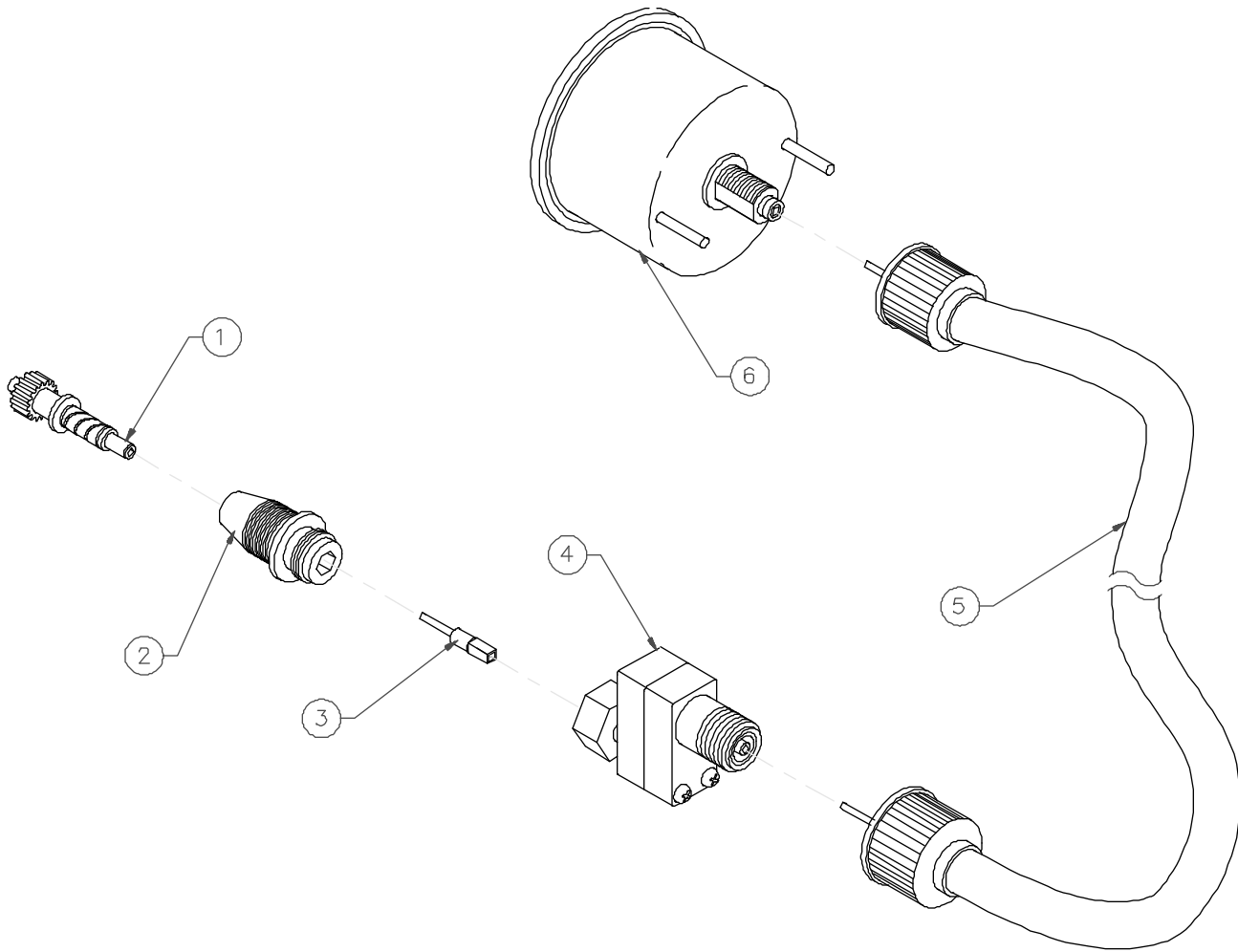
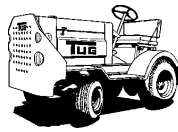


Figure 16: Speedometer Installation

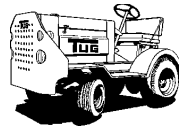
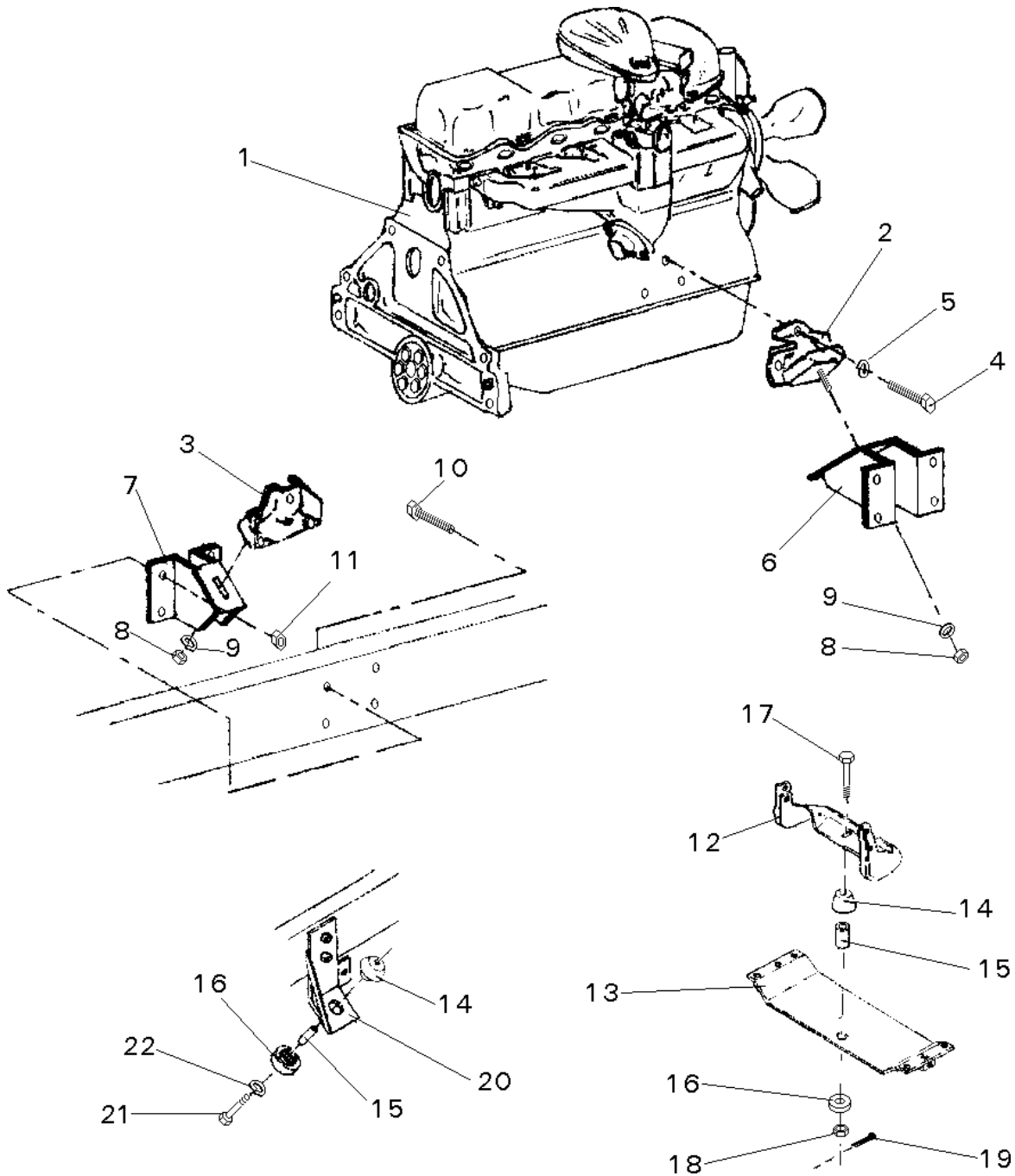
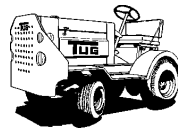


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
16-1	246	eohz-173222b	mh-nd-553-2	Transmission pinion	1	As Req'd
16-2	246	ct8z-17297a	mh-nd-553	Transmission adapter	1	"
16-3	189	hr183	mh-nd-553-1	Adapter driver	1	"
16-4	----	-----	T6-9011-404	Speedometer adapter, .4105 ratio	1	"
16-5	----	-----	T6-9011-245	Speedometer cable, 4'	1	"
16-6	196	82677	mh-nd-549	Speedometer head	1	"
16-	----	-----	Opt-mis-030	Speedometer, Kit -MA	1	"



**Figure 17: Engine and Engine Mounts
Installation - Ford Gasoline Engine**

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
17-1	246	csg-649	T6-1001-101e	ford 300 c.i.d. gasoline engine (note 1)	1	362 & Up
17-2	127	270-2331	T6-4046-107	engine mount, rh, 300	1	"
17-3	127	270-2332	T6-4045-109	engine mount, lh, 300	1	"
17-4	----	-----	7/16-14ncx1"	hex head bolt	6	"
17-5	----	-----	7/16	lock washer	6	"
17-6	----	-----	T6-4046-103	Engine support, rh, 300 (small)	1	"
17-7	----	-----	T6-4045-103	Engine support, lh, 300 (large)	1	"
17-8	----	-----	3/8-16nc	locknut	2	"
17-9	----	-----	3/8	flat washer	2	"
17-10	----	-----	1/2-13ncx1-1/2"	hex head bolt	8	"
17-11	----	-----	1/2-13nc	locknut	8	"
17-12	246	c5tz-6028b	T6-1000-103	front engine mounting bracket, 240	1	001-361
17-13	----	-----	T6-4007-103	front spring plate assembly	1	001-020
	----	-----	T6-4007-113	front spring plate assembly	1	021-137
	----	-----	T6-4007-159	front spring plate assembly	1	138-234
	----	-----	T6-4007-165	front spring plate assembly	1	235-310
	----	-----	T6-4007-169	front spring plate assembly	1	311-361
	----	-----	T6-4007-171	front spring plate assembly	1	362 & Up
17-14	246	c3tz-6068d	T6-1000-105	engine shock mount, upper, 240	3	001-361
17-15	246	citt-6a027c	T6-1000-107	shock mount spacer, 240	3	"
17-16	246	citt-6a061d	T6-1000-109	engine shock mount, lower, 240	3	"
17-17	----	-----	T6-1000-111	front engine mounting bolt, 240	1	"
17-18	----	-----	T6-1000-117	front engine mounting nut, 240	1	"
17-19	----	-----	1/8"	cotter pin	1	"
17-20	----	-----	T6-4022-103	rear engine mount, lh, 240	1	"
17-	----	-----	T6-4022-105	rear engine mount, rh, 240	1	"

1. Ford 240 C.I.D. gasoline engine (original equipment through serial number 361) is no longer available. Replacement of this engine must be with Ford 300 C.I.D. gasoline engine T6-1001-101E (item 1) and requires replacement of FMX automatic transmission with C-6 automatic transmission and replacement of all associated mounts with appropriate mounts as shown.

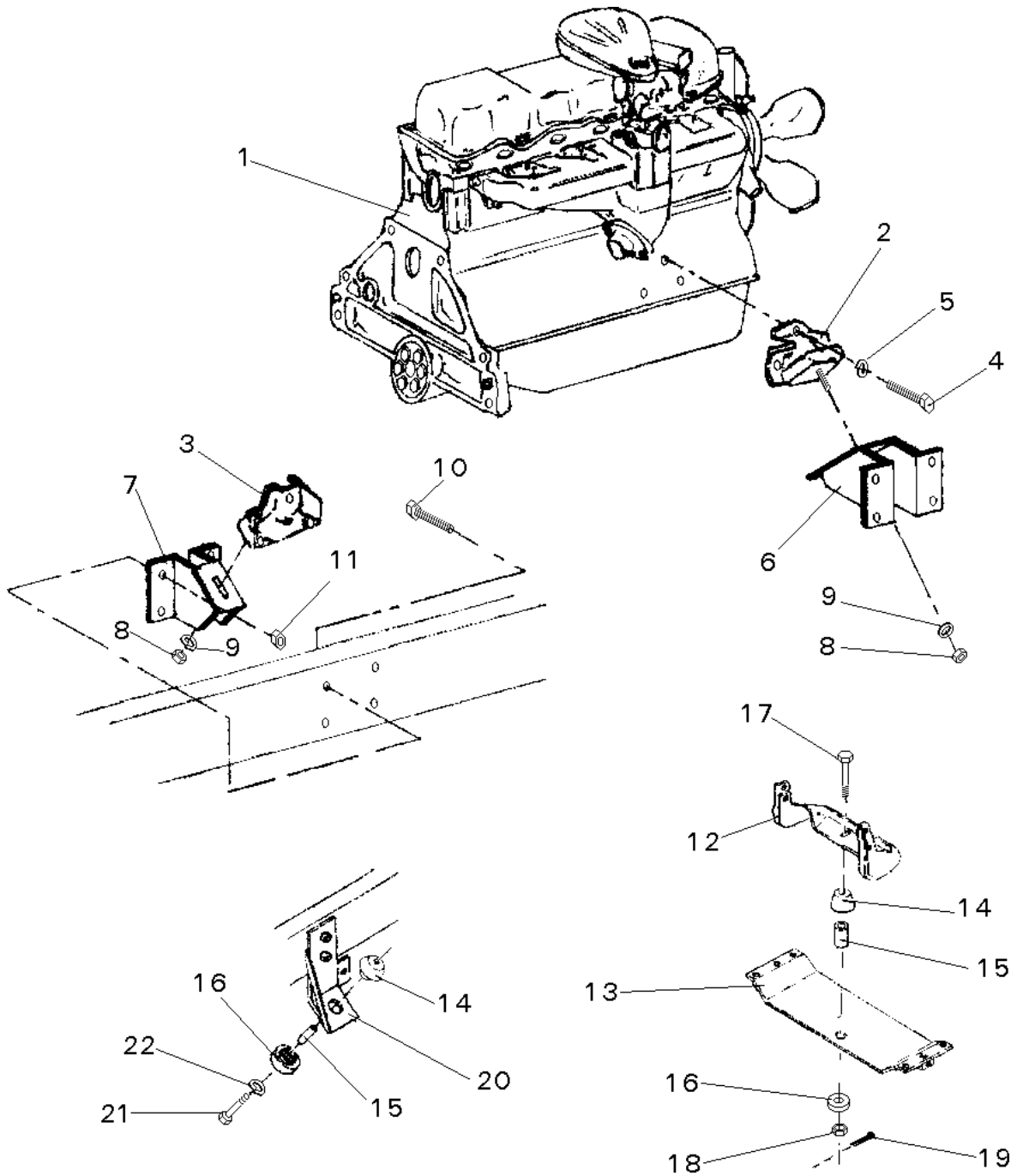
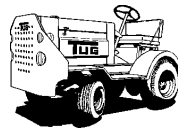


Figure 17: Engine and Engine Mounts Installation - Ford Gasoline Engine

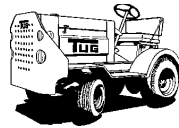
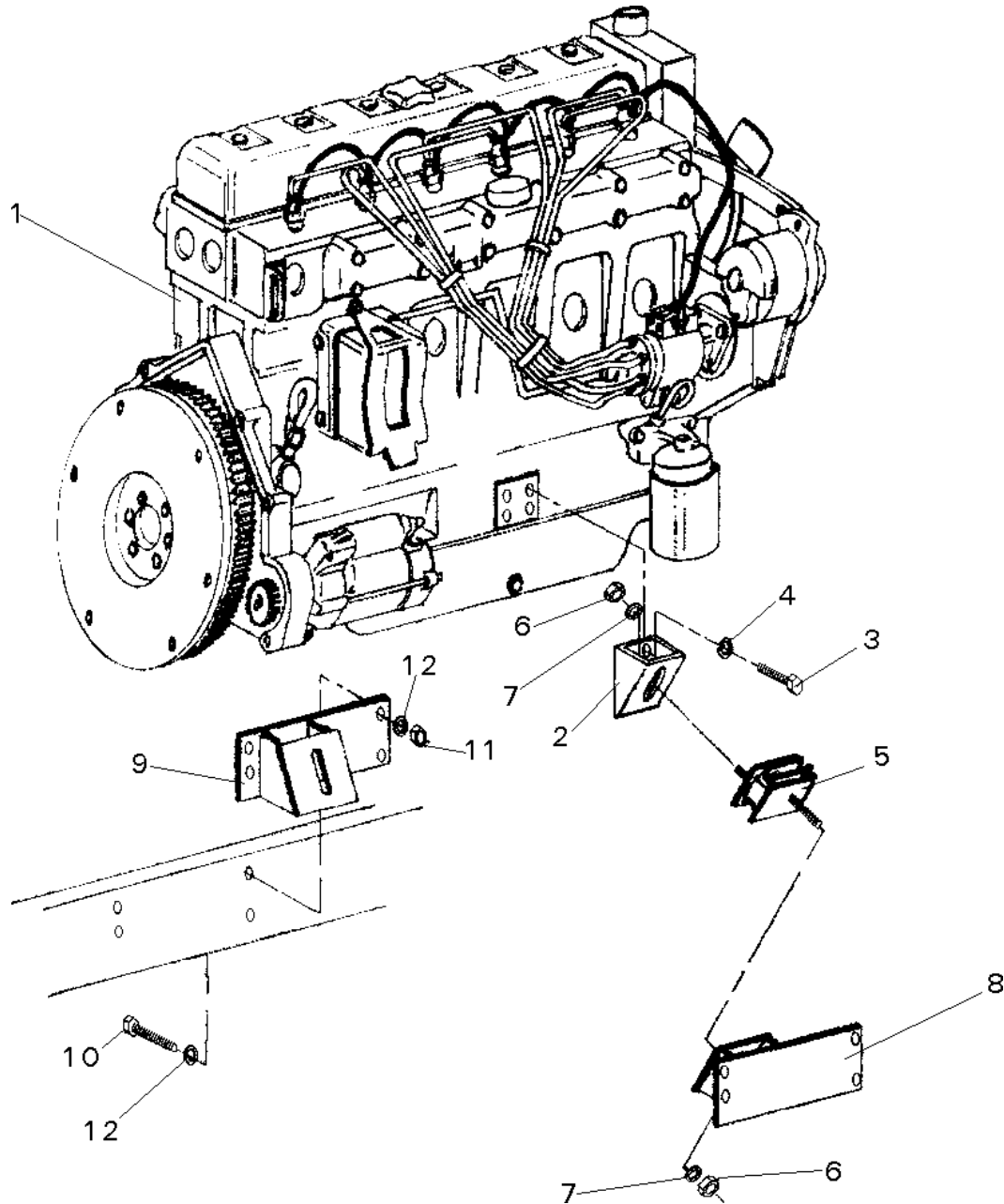
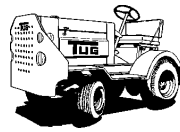


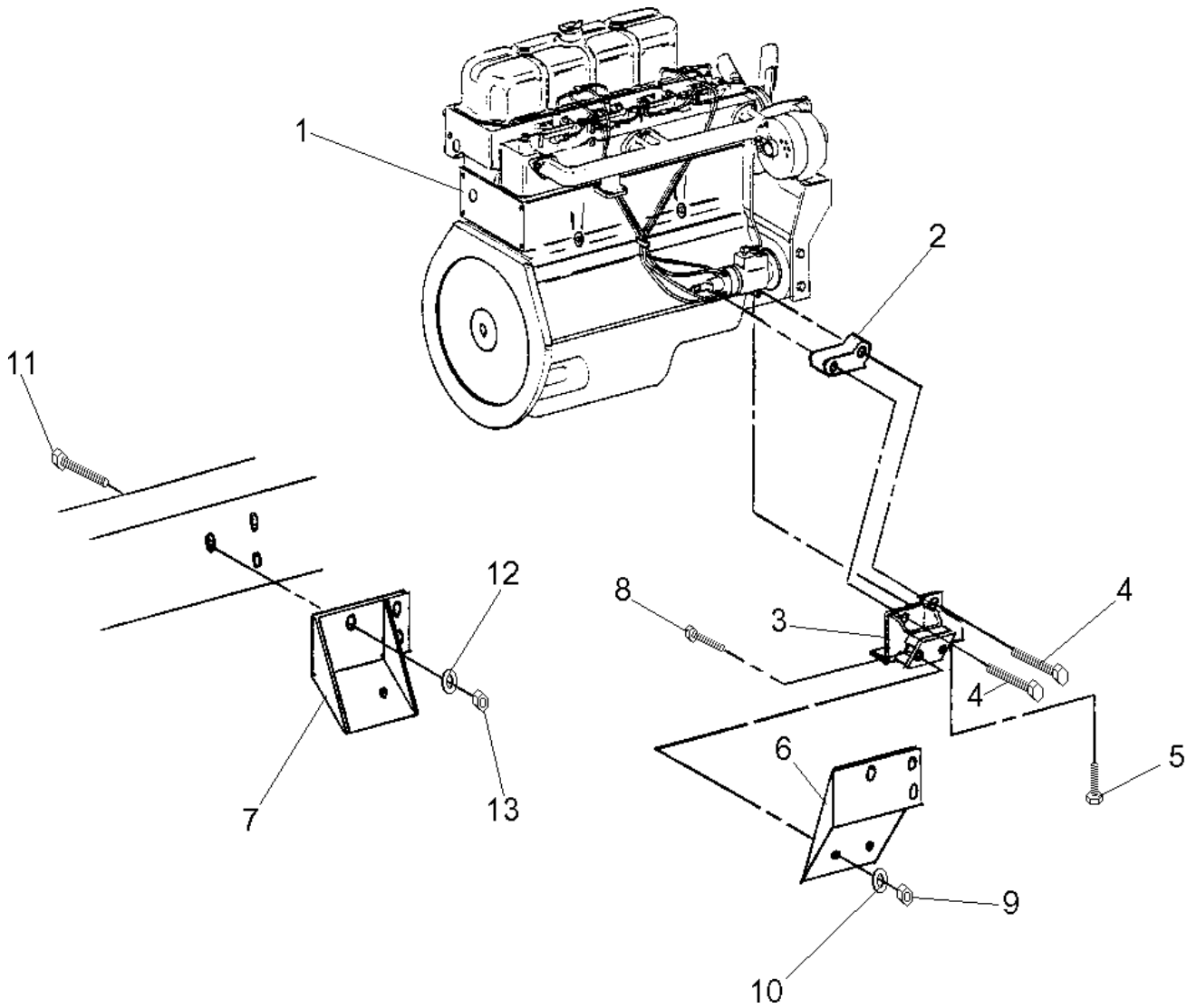
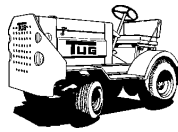
Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
17-21	----	-----	9/16-18ncx4"	rear engine mounting bolt, 240	2	001-361
17-22	----	-----	9/16	lock washer	2	"
17-	156	310-0054	T6-7002-137	engine block heater, freeze plug type	1	As Req'd
	156	810-0101	T6-1300-171	engine heater, pump-type (obsolete)	1	"
17-	----	-----	T6-1300-172	bracket, pump-type engine heater	1	"
17-	----	-----	T6-9011-368	bypass fitting, coolant bypass system, low mt fan	1	"
17-	----	-----	T6-9011-369	bypass hose, coolant bypass system, low mt fan	1	"
17-	----	-----	T6-9011-370	hose, pcv valve to manifold low mount fan	1	"
17-	----	-----	T6-9011-371	hose, breather vent to air cleaner, low mount fan	1	"
17-	----	-----	T6-9011-373	y-fitting, heater hose, low mount fan	1	"
17-	256	ev-127	T6-9011-372	pcv valve	1	"
17-	256	387881-s100	-----	vacuum tree	1	362 & Up
17-	256	d5te-9820ba	T6-1001-189	choke inlet tube	1	"
17-	256	d7jl-9817a	T6-1001-187	choke outlet tube	1	"
17-	256	d9ta-7b095ba	-----	tube, transmission vacuum modulator	1	"
17-	256	E7JE-6675A	T6-1001-215	Oilpan	1	"
17-	256	E3TZ-6781B	T6-1001-217	Gasket, Oil Pan	1	"
17-	----	EPGC7JZ-6784A	-----	Dipstick Tube	1	"
17-	----	EPGC5TZ-6750J	-----	Oil Dipstick	1	"
17-	----	D1AZ-7007-A	-----	Adaptor Plate	1	"
17-	600	380090	T6-1001-185	Tee Assembly, Trans and Distr Vacuum	1	"
17-	600	387331s100	T6-1001-183	Flute Valve **USE EPG387331-S100**	1	"
17-	256	-----	T6-1001-179	Exhaust Shroud **USE EPGD9TZ-9A603B**	1	"



**Figure 18: Engine and Engine Mounts
Installation - Cummins/Onan Engine**

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
18-1	-----	-----	T6-3200-131	cummins/onan diesel engine (note 1)	1	As Req'd
18-2	256	c054103100	-----	engine mount	2	"
18-3	-----	-----	3/8-16ncx1"	hex head bolt	8	"
18-4	-----	-----	3/8	lock washer	8	"
18-5	256	402-0578	T6-3200-161	isolator, engine mount	2	"
18-6	-----	-----	3/8-16nc	locknut	4	"
18-7	-----	-----	3/8	flat washer	4	"
18-8	-----	-----	T6-3200-103	engine support, rh	1	"
18-9	-----	-----	T6-3200-101	engine support, lh	1	"
18-10	-----	-----	1/2-13ncx1-1/2"	hex head bolt	8	"
18-11	-----	-----	1/2-13nc	locknut	8	"
18-12	-----	-----	1/2	flat washer	16	"
18-	256	145-0553	-----	vacuum pump	1	"
18-	-----	C0145-0553	T6-9011-168	Vacuum Pump Belt	1	"
18-	-----	-----	T6-3200-111	bracket, vacuum pump	1	"
18-	127	15330	T6-9011-168	belt, vacuum pump	1	"
18-	156	8801258	T6-7002-137	engine block heater, freeze plug type	1	"
	156	810-0101	T6-1300-171	engine heater, pump-type	1	"
	256	122-0550	122-0550	Oil Filter	1	"
	256	149-1754	149-1754	Fuel Filter Element	1	"
	-----	149-1755	-----	Fuel Filter Assembly	1	"
	200	4.236	T6-1200-103	Perkins Engine 4.236	1	"
	-----	190067-902	-----	Adaptor, C6 to Onan	1	"

1. Cummins/Onan diesel engine T6-3200-131 (item 1) is no longer available. Parts support for Cummins/Onan diesel engine is available.



**Figure 18a: Engine and Engine Mounts
Installation - Hercules Diesel Engine**

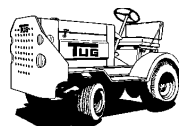
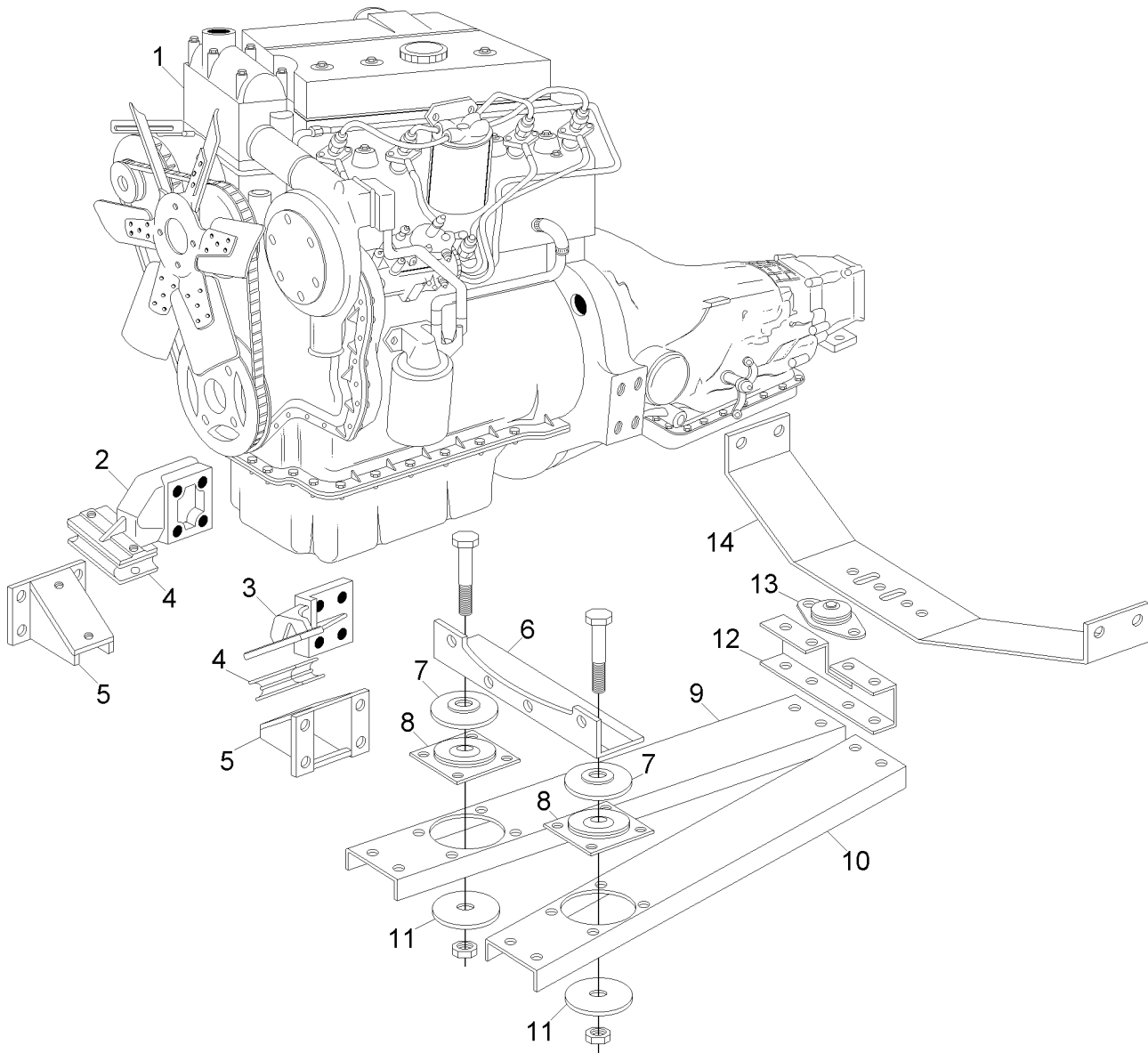
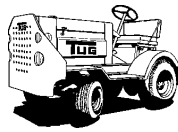


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
18a-1	388	d2300	T6-7200-001	Hercules diesel engine	1	As Req'd
18a-2	388	40-3103101	-----	spacer, engine mount	2	"
18a-3	388	40-0037559	-----	engine mount, rh (note 1)	1	"
18a-	388	40-0037558	-----	engine mount, lh (note 1)	1	"
18a-	388	40-0008318	-----	insulator, engine mount (note 1)	1	"
18a-4	----	-----	9/16-12ncx2-1/2"	hex head bolt	4	"
18a-5	----	-----	9/16-12ncx1-1/4"	hex head bolt	4	"
18a-6	----	-----	T6-7200-045	engine support, rh	1	"
18a-7	----	-----	T6-7200-040	engine support, lh	1	"
18a-8	----	-----	7/16-14ncx1-1/4"	hex head bolt	4	"
18a-9	----	-----	7/16-14nc	locknut	4	"
18a-10	----	-----	7/16	flat washer	4	"
18a-11	----	-----	1/2-13ncx1-1/4	hex head bolt	6	"
18a-12	----	-----	1/2	flat washer	6	"
18a-13	----	-----	1/2-13nc	locknut	6	"
18a-	388	40-0015653	-----	vacuum pump	1	"
18a-	388	40-0004628	-----	belt, vacuum pump	1	"
18a-	156	88011258	T6-7002-137	engine block heater, freeze plug type	1	"
	156	810-0101	T6-1300-171	engine heater, pump type	1	"
18a-	388	40-3044852	-----	flywheel assembly	1	"
18a-	388	40-3042952	-----	adapter plate assembly	1	"

1. Engine mounts 40-0037558 and 40-0037559 do not include insulator 40-0008318.



**Figure 18B: Perkins 1004
Diesel Engine Installation**

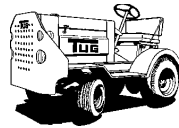
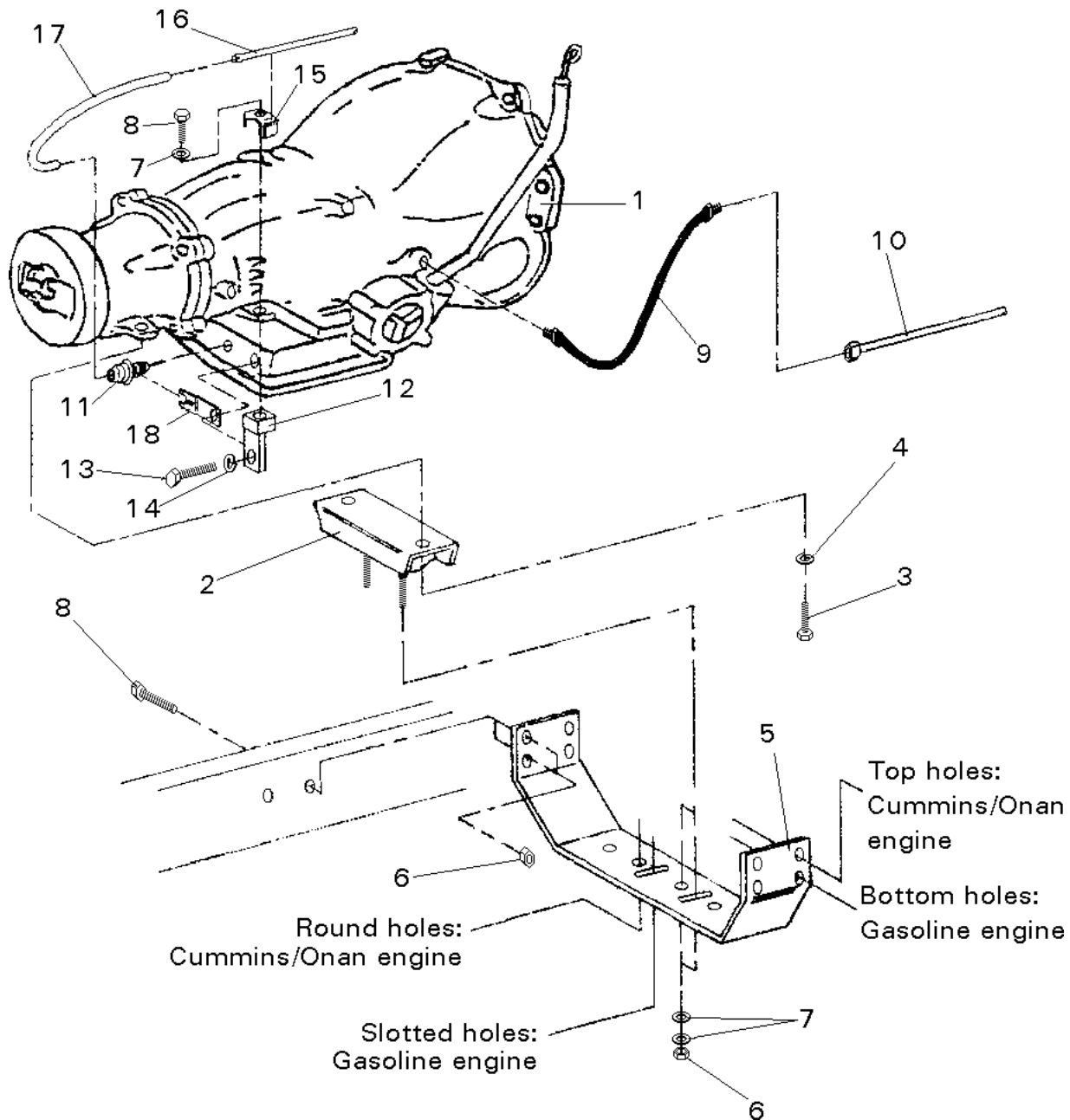
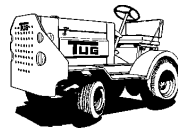


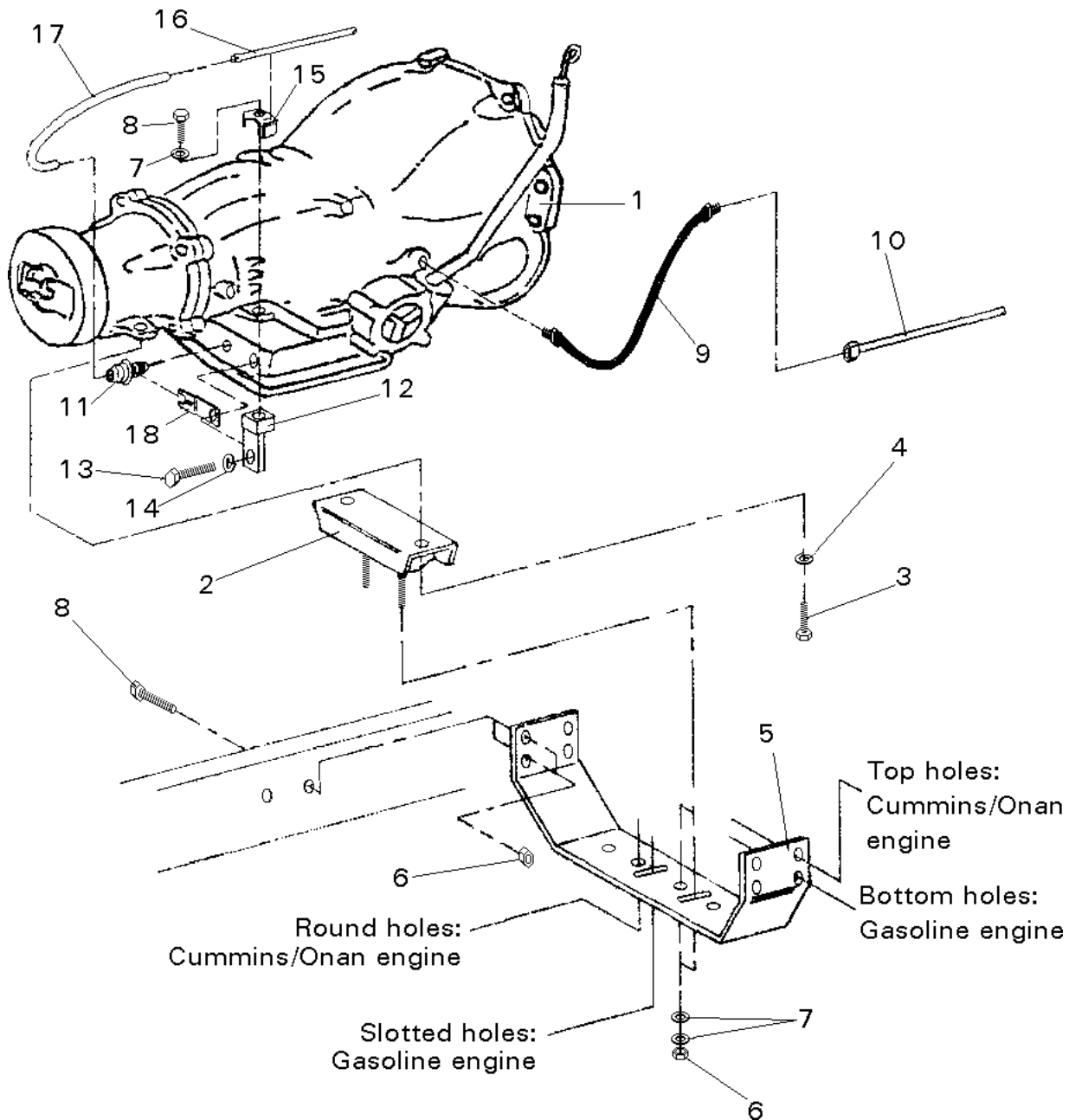
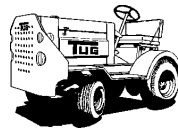
Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
18b-1	200	1004-4	T6-2200-100	Perkins 1004 Diesel Engine	1	As Req'd
18b-2	200	38313513	-----	Engine Mount, Cast Iron -R/H	1	"
18b-3	200	38313631	-----	Engine Mount, Cast Iron -L/H	1	
18b-4	200	0550053	T6-1203-109	Rubber Mount, Front -Engine	2	
18b-5	199	-----	T6-1203-101A	Engine Support	2	
18b-6	199	-----	T6-1204-103	Transmission Mount Angle Support	1	
18b-7	68	18-311A	T6-1211-113	Washer, Recessed Center	4	
18b-8	68	17/277-50	T6-1204-111	Rubber Engine Mount	2	
18b-9	199	-----	T6-1204-107	Transmission Support Beam R/H	1	
18b-10	199	-----	T6-1204-108	Transmission Support Beam L/H	1	
18b-11	68	18-391C	T6-1211-115	Washer, Plain	1	
18b-12	2	-----	T6-1204-105	Transmission Mount Channel	1	
18b-13	68	17/379-35	T6-1204-113	Rubber Transmission Mount	1	
18b-14	54	-----	T6-4205-105	Transmission Mount, Diesel	1	



**Figure 19: C6 Transmission and Transmission Mounts Installation,
Gasoline and Cummins/Onan Diesel Engine**

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
19-1	-----	-----	T6-1001-101t	transmission, 2-speed automatic (gasoline engine) (note 1)	1	362 & Up
	246	c-6	T6-1008-111	transmission, 3-speed automatic (diesel engine) (note 2)	1	"
19-2	256	d6dz-6068-a	md-p21-105	isolator, transmission mount	1	"
19-3	-----	-----	1/2-13ncx1-1/4"	hex head bolt	2	"
19-4	-----	-----	1/2	lock washer	2	"
19-5	-----	-----	T6-4047-103	transmission support, Solid mount drive axle	1	As Req'd
	-----	-----	T6-4027-501	transmission support, spring mount drive axle	1	"
19-6	-----	-----	3/8-16nc	locknut	6	362 & Up
19-7	-----	-----	3/8	flat washer	5	"
19-8	-----	-----	3/8-16ncx1"	hex head bolt	5	"
19-	246	d8tz-7a100b	T6-1008-121	2-speed valve body, c-6 (gasoline engine)	1	"
	246	d9fp-7a100aa	T6-1008-123	3-speed valve body, c-6 (diesel engine)	1	"
19-9	227	10404U755B0501400	T6-6018-103	hose, transmission line	2	001 & Up
19-10	-----	-----	5/16odx0.035	transmission cooling line	Ref.	"
	-----	-----	T6-6018-105	Hose, Trans. Line 14" OAL	1	"
19-11	22	1-4657	T6-1008-113	modulator valve, c-6	1	362 & Up
	256	ciatz-7a377b	T6-1008-103	modulator valve, Fmx	1	001-361
19-12	-----	-----	T6-1212-105	transmission ear support (diesel engine)	1	362 & Up
	-----	-----	3/8-16nc	locknut (gasoline engine)	1	"
19-13	-----	-----	1/4-20ncx1"	hex head bolt (diesel engine)	1	362 & Up
	-----	-----	1/4-20ncx3/4"	hex head bolt (gasoline engine)	1	"
19-	70	2180-90"	660-1-1264	Modulator Cable	1	"
19-	256	TPG-E7TZ-7A020D	-----	Dipstick, 22"	1	"
19-	-----	TPG-E0TZ-7A228-A	-----	Tube, 14 1/2"	1	"

1. FMX transmission (original equipment through serial number 361) is no longer available. Replacement of this transmission must be with C-6 2-speed transmission T6-1001-101T and requires replacement of 240 C.I.D. gasoline engine with 300 C.I.D. gasoline engine and replacement of associated mounts with appropriate mounts as shown.
2. FMX transmission (original equipment through serial number 361) is no longer available. Replacement of this transmission must be with C-6 3-speed transmission T6-1008-111 and requires replacement of associated mounts with appropriate mounts as shown.



**Figure 19: Transmission and Transmission Mounts Installation,
Gasoline and Cummins/Onan Diesel Engine**

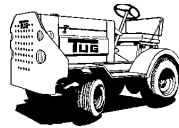
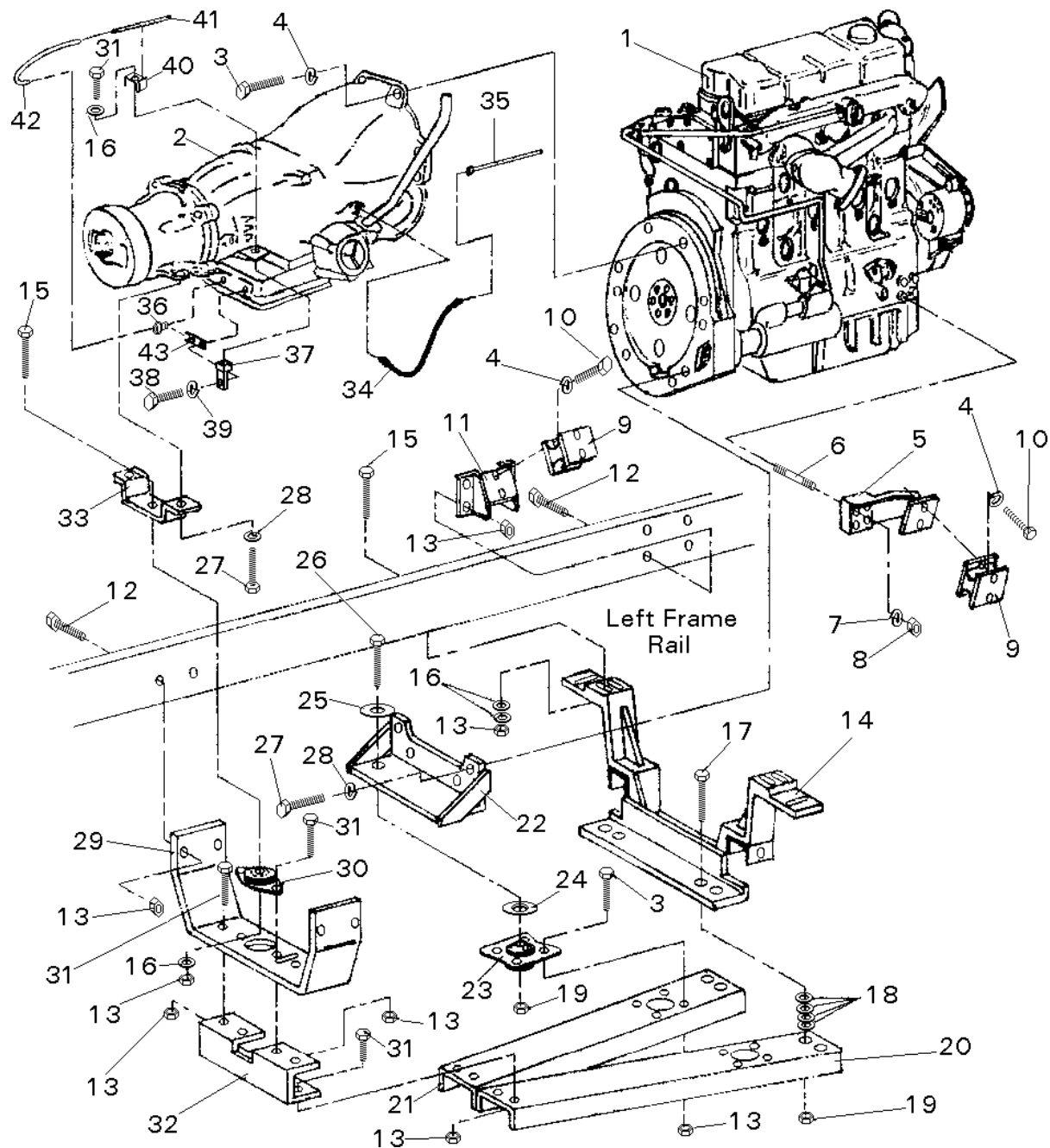
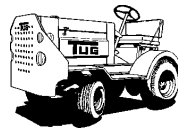


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
19-14	----	-----	1/4	lock washer	1	362 & Up
19-15	246	n803496-s36	-----	clip, vacuum line	2	"
19-16	246	d9ta-7b095ba	-----	vacuum line	1	"
19-17	----	-----	7/32id	vacuum hose, rubber	Ref.	"
19-18	246	d3az-7f006b	-----	clip, modulator	1	"
19-	----	-----	5/16"ID	hose, transmission and reduction gear vent	1	As Req'd
19-	256	c2rz-9155-a	mg-nd-622	filter, transmission and reduction gear vent	1	"
19-	196	280ec(280ee)	x6006-101	transmission oil temperature sensing unit	1	"
19-	196	82344	x6004-101	transmission oil temperature gauge	1	"
	256	C5AZ-7A098C	-----	Transmission Filler Kit ***USE NEW #D5AZ-7A098B***	ref	"



**Figure 20: Transmission and Transmission
Mounts Installation, Perkins 4.236 Diesel Engine**

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
20-1	----	-----	T6-1200-103	perkins 4.236 diesel engine	1	As Req'd
20-2	246	c-6	T6-1008-111	transmission, 3-speed automatic (note 1)	1	"
20-3	----	-----	3/8-16ncx1-1/4"	hex head bolt	14	"
20-4	----	-----	3/8	lock washer	18	"
20-5	200	38313513	-----	engine mount, rh	1	"
20-	200	38313631	-----	engine mount, lh	1	"
20-6	200	o826618	-----	stud	8	"
20-7	200	o920055	-----	lock washer	8	"
20-8	200	o576054	-----	locknut	8	"
20-9	200	o550053	T6-1203-109	isolator, engine mount	2	"
20-	200	2641728	-----	Fuel Pump	1	"
20-	200	2487845	-----	Oil Cap	1	"
20-	200	35772655	-----	Oil Tube	1	"
20-	200	31788334	-----	Oil Dipstick	1	"
20-10	----	-----	3/8-24nfx1"	hex head bolt	8	"
20-11	----	-----	T6-1203-101a	engine support	2	"
20-12	----	-----	3/8-16ncx1-1/2"	hex head bolt	12	"
20-13	----	-----	3/8-16nc	locknut	25	"
20-14	----	-----	T6-1212-103	front spring aft support	1	"
20-15	----	-----	3/8-16ncx2"	hex head bolt	5	"
20-16	----	-----	3/8	flat washer	10	"
20-17	----	-----	1/2-13ncx2"	hex head bolt	4	"
20-18	----	-----	1/2	flat washer (note 2)	Ref.	"
20-19	----	-----	1/2-13nc	locknut	6	"
20-20	----	-----	T6-1204-108	transmission suppor, rh	1	"
20-21	----	-----	T6-1204-107	transmission support, Lh	1	"
20-22	----	-----	T6-1204-103	engine mount angle, rear	1	"
20-23	68	17/277-50	T6-1204-111	rubber engine mount	2	"
20-24	68	18-311a	T6-1211-113	recessed washer	2	"
20-25	68	18-391c	T6-1211-115	flat washer	2	"
20-26	----	-----	1/2-13ncx3-1/2"	hex head bolt	2	"
20-27	----	-----	1/2-13ncx1-1/2"	hex head bolt	6	"
20-28	----	-----	1/2	lock washer	6	"

1. FMX transmission (original equipment through serial number 361) is no longer available. Replacement of this transmission must be with C-6 3-speed transmission T6-1008-111 and requires replacement of associated mounts with appropriate mounts as shown.
2. 1/2-inch flat washers (item 18) are used as required to shim between front spring aft support T6-1212-103 (item 14) and transmission support beams T6-1204-108 and T6-1204-107 (items 20 and 21).

engine, transmission and mounts installation,

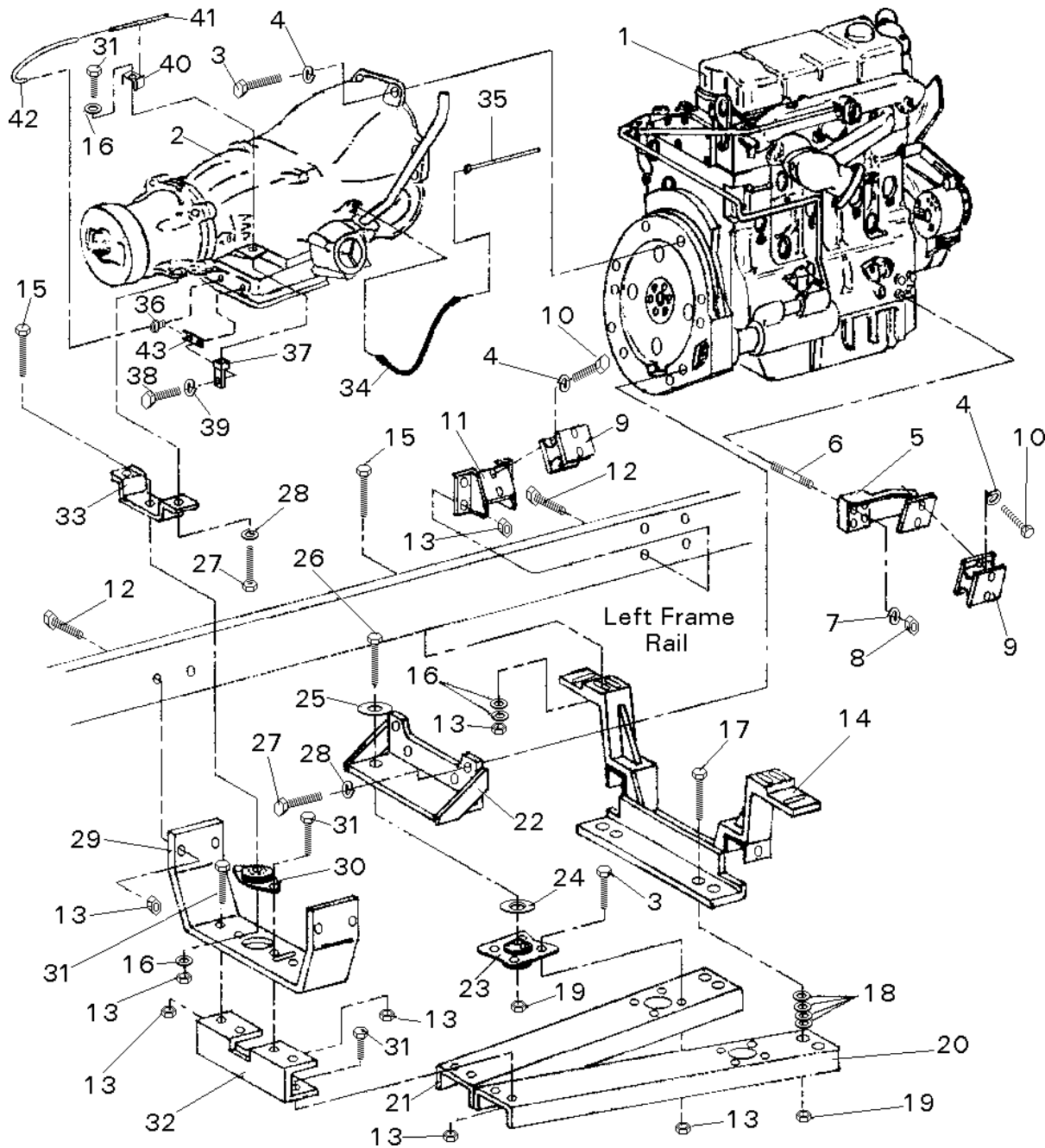
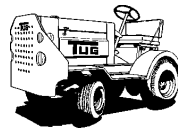


Figure 20: Transmission and Transmission Mounts Installation, Perkins 4.236 Diesel Engine

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
20-29	----	-----	T6-4205-105	transmission support, solid mount drive axle	1	"
	----	-----	T6-4227-501	transmission support, spring mount drive axle	1	"
20-30	68	17/339-35	T6-1204-113	transmission mount, rubber	1	"
20-31	----	-----	3/8-16ncx1"	hex head bolt	9	"
20-32	----	-----	T6-1204-105	transmission support channel	1	"
20-33	----	-----	T6-4205-101	transmission mounting strap	1	"
20-34	227	f4211128050504	T6-6018-123	hose, transmission line	2	001 & Up
20-35	----	-----	5/16odx.035	transmission cooling line	Ref.	"
20-36	22	1-4657	T6-1008-113	modulator valve, c-6	1	362 & Up
	256	ciaz-7a377b	T6-1008-103	modulator valve, fmx	1	001-361
20-37	----	-----	T6-1212-105	transmission ear support	1	362 & Up
20-38	----	-----	1/4-20ncx1"	hex head bolt	1	"
20-39	----	-----	1/4	lock washer	1	"
20-40	246	n803496-s36	-----	clip, vacuum line	2	As Req'd
20-41	246	d9ta-7b095ba	-----	vacuum line	1	"
20-42	----	-----	7/32id	vacuum hose, rubber	Ref.	"
20-43	246	d3az-7f006b	-----	clip, modulator	1	362 & Up
20-	----	-----	5/16"ID	hose, transmission and reduction gear vent	1	As Req'd
20-	256	c2rz-9155-a	mg-nd-622	filter, transmission and reduction gear vent	1	"
20-	196	280ec(280ee)	x6006-101	transmission oil temperature sensing unit	1	"
20-	196	82344	x6004-101	transmission oil temperature gauge	1	"
20-	156	8802297	T6-1211-119	engine block heater, freeze plug type	1	"
	156	810-0101	T6-1300-171	engine heater, pump-type	1	"
20-	----	-----	T6-1212-109	lower transmission adaptor closeout	1	"
20-	----	-----	T6-1212-110	right hand transmission adaptor closeout	1	"
20-	----	31162121	-----	Ring Gear, 4.236	1	"
20-	----	37148241	-----	Adaptor Plate, C6 to 4.236	1	"
20-	----	37138091	-----	Flywheel msg	1	"

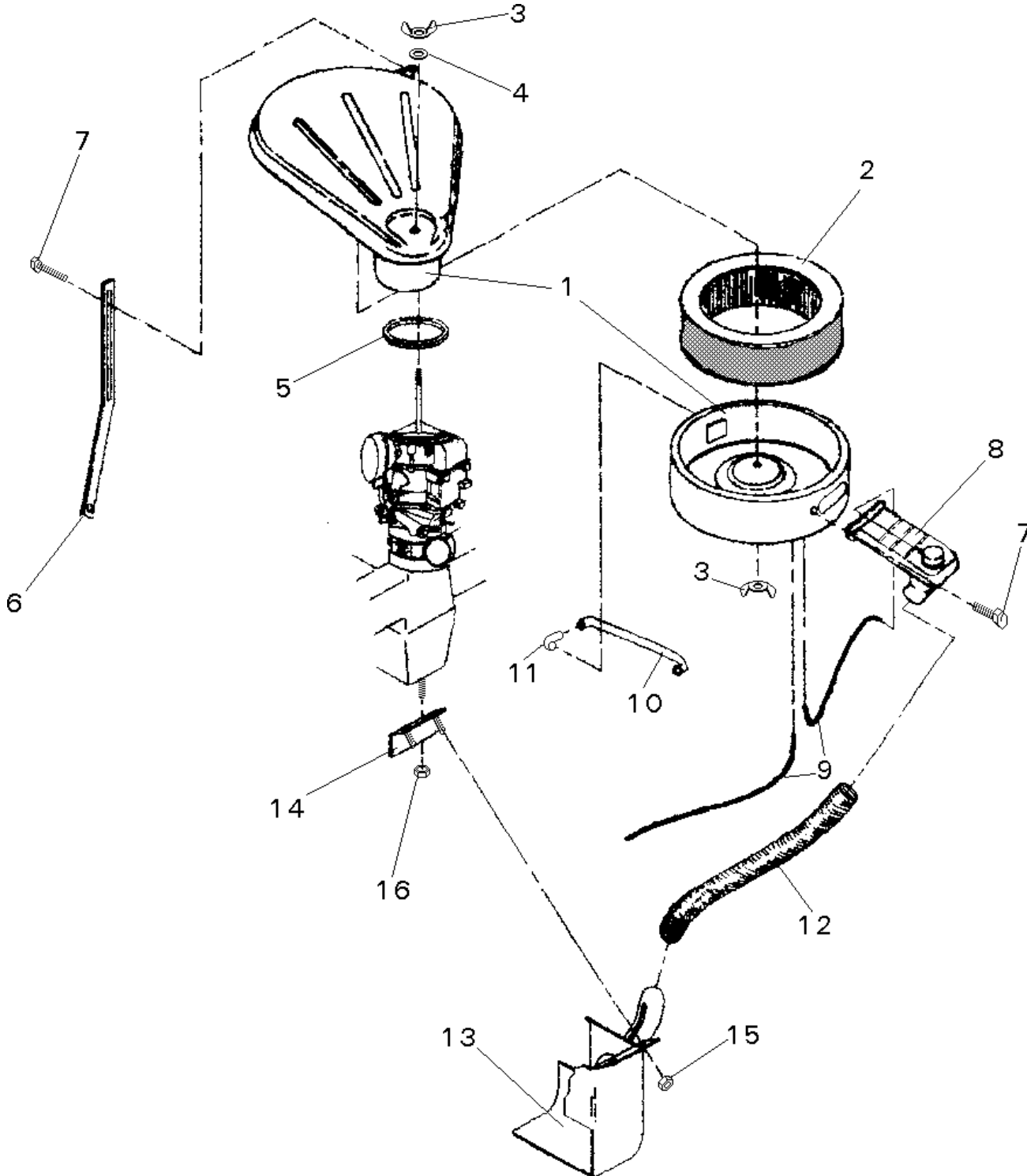
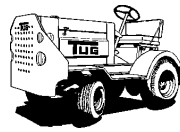


Figure 21: Air Cleaner Assembly, Gasoline Engine

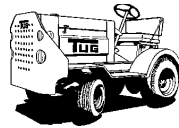
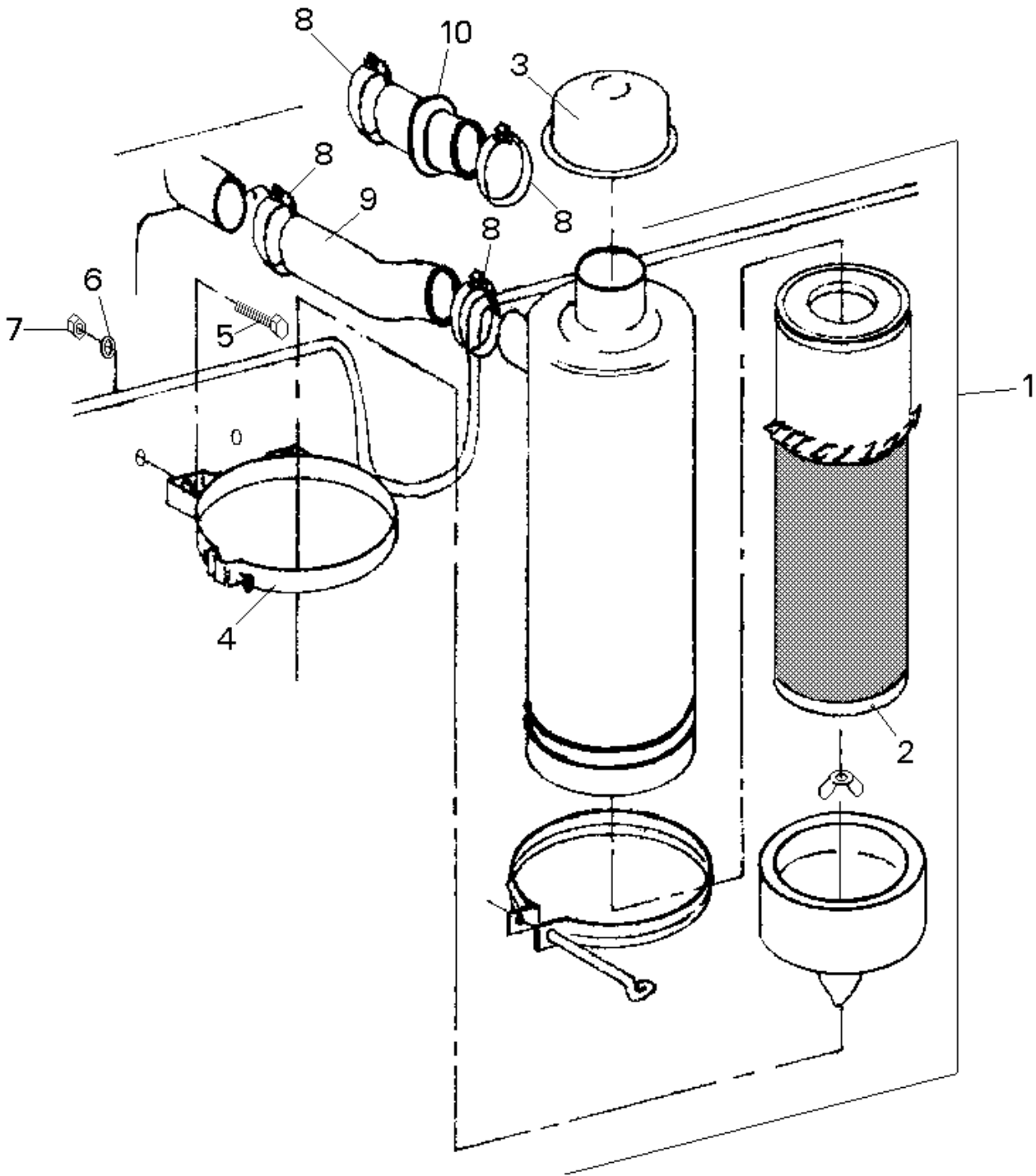
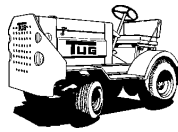


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
21-1	246	d3uz-9600a	T6-1001-111	air filter housing (note 1)	1	Note 2
	----	-----	T6-1001-111m	air filter housing (note 1)	1	Note 3
21-2	22	2055	T6-1001-209	air filter element (note 1)	1	001 & Up
21-3	----	-----	1/4-20nc	wingnut	2	"
21-4	----	-----	1/4	flat washer	1	"
21-5	246	c8dz-9654a	-----	gasket, air cleaner	1	"
21-6	246	e5jl-9a627aa	T6-1006-101	air cleaner bracket	1	"
21-7	----	-----	5/16-18ncx1/2"	hex head bolt	4	"
21-8	246	d7uz-9a626b	T6-1001-113	duct and valve assembly	1	"
21-9	----	-----	7/32id	vacuum hose, rubber	Ref.	"
21-10	246	d1fz-6a664b	-----	crank case vent hose	1	"
21-11	246	384411s	-----	elbow, crank case vent hose	1	"
21-12	246	c9uz-9652a	-----	flex tube	1	"
21-13	246	d9tz-9a603b	-----	manifold shroud assembly	1	"
21-14	246	d3az-9c670b	-----	bracket, manifold shroud assembly	1	"
21-15	----	-----	5/16-18nc	locknut	2	"
21-16	----	-----	7/16-14nc	locknut	1	"
21-	246	epg387331-5100	T6-1001-185	flute valve	1	"
21-	246		T6-1001-187	Choke Outlet Tube	1	"
21-	246		T6-1001-189	Carb Inlet Tube	1	"

1. Air filter housings T6-1001-111 and T6-1001-111M include air filter element T6-1001-209 (item 2).
2. Used on all gasoline tractors except when equipped with Hyster governor.
3. Used on all tractors equipped with Hyster governors.



**Figure 22: Air Cleaner Assembly,
Diesel Engine (Without Pre-Filter)**

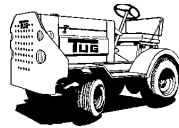
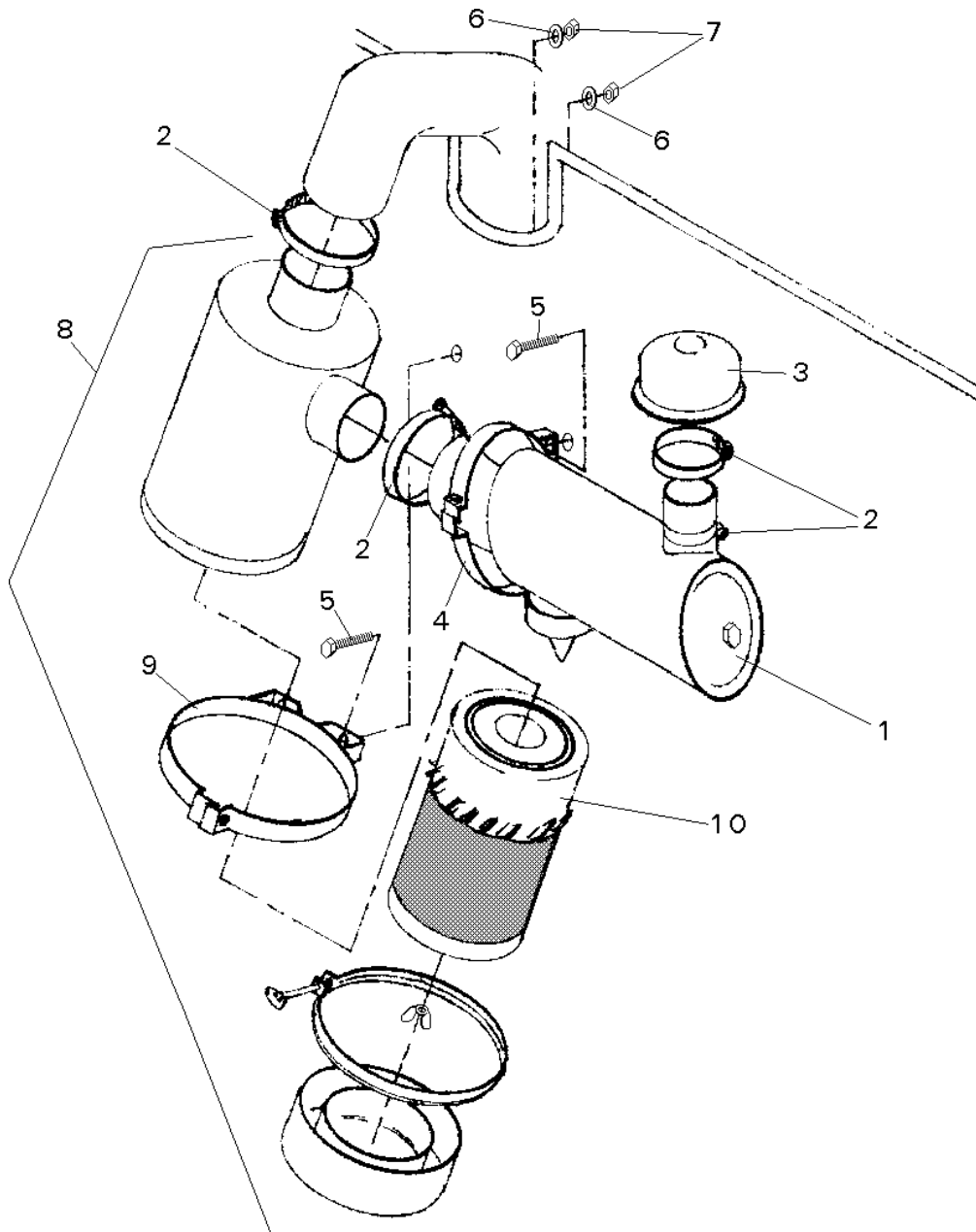
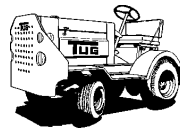


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
22-1	202	FWA06-5015	T6-1201-209a	air filter housing (note 1)	1	As Req'd
22-2	625	42222	T6-1201-209	air filter element (note 1)	1	"
22-3	46	GAX00-1966	T6-1201-213	inlet hood, air filter	1	"
22-4	46	DNP00-7191	T6-1206-103	mounting strap, air cleaner	2	"
22-5	----	-----	1/4-20ncx1"	hex head bolt	4	"
22-6	----	-----	1/4	flat washer	4	"
22-7	----	-----	1/4-20nc	locknut	4	"
22-8	----	-----	#40	hose clamp	2	"
22-9	127	70955	T6-3200-135	air cleaner hose	1	"
22-	----	-----	T6-7200-035	Air intake adaptor, Hercules diesel engine	1	"
22-10	----	-----	T6-	Air intake adaptor, Perkins 1000-4 diesel engine	1	"
22-11	----	-----	T6-1201-217	Clamp	1	"
22-12	----	-----	T6-1201-215	Cap	1	"

1. Air filter housing T6-1201-209A (item 1) includes air filter element T6-1201-209 (item 2).



**Figure 23: Air Cleaner Assembly,
Diesel Engine (With Pre-Filter)**

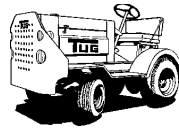


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
23-1	46	fhg065359	T6-1201-217	air precleaner assembly (note 1)	1	As Req'd
23-	----	-----	T6-1201-217-01	air precleaner element (note 1)	1	"
23-2	----	-----	#40	hose clamp	5	"
23-3	46	x001966	T6-1201-213	inlet hood, air filter	1	"
23-4	46	dnp00-7191	T6-1206-103	mounting strap, air cleaner	2	"
23-5	----	-----	1/4-20ncx1"	hex head bolt	8	"
23-6	----	-----	1/4	flat washer	8	"
23-7	----	-----	1/4-20nc	locknut	8	"
23-8	46	dnfwg08-0023	mj-nd-6201	air filter assembly (note 2)	1	"
23-9	46	dnp00-4307	mj-nd-6202	mounting strap, air cleaner	2	"
23-10	----	-----	mj-nd-6201-01	air filter element (note 2)	1	"

1. Air precleaner assembly T6-1201-217 (item 1) includes air precleaner element T6-1201-217-01.
2. Air filter assembly MJ-ND-6201 (item 8) includes air filter element MJ-ND-6201-01 (item 10).

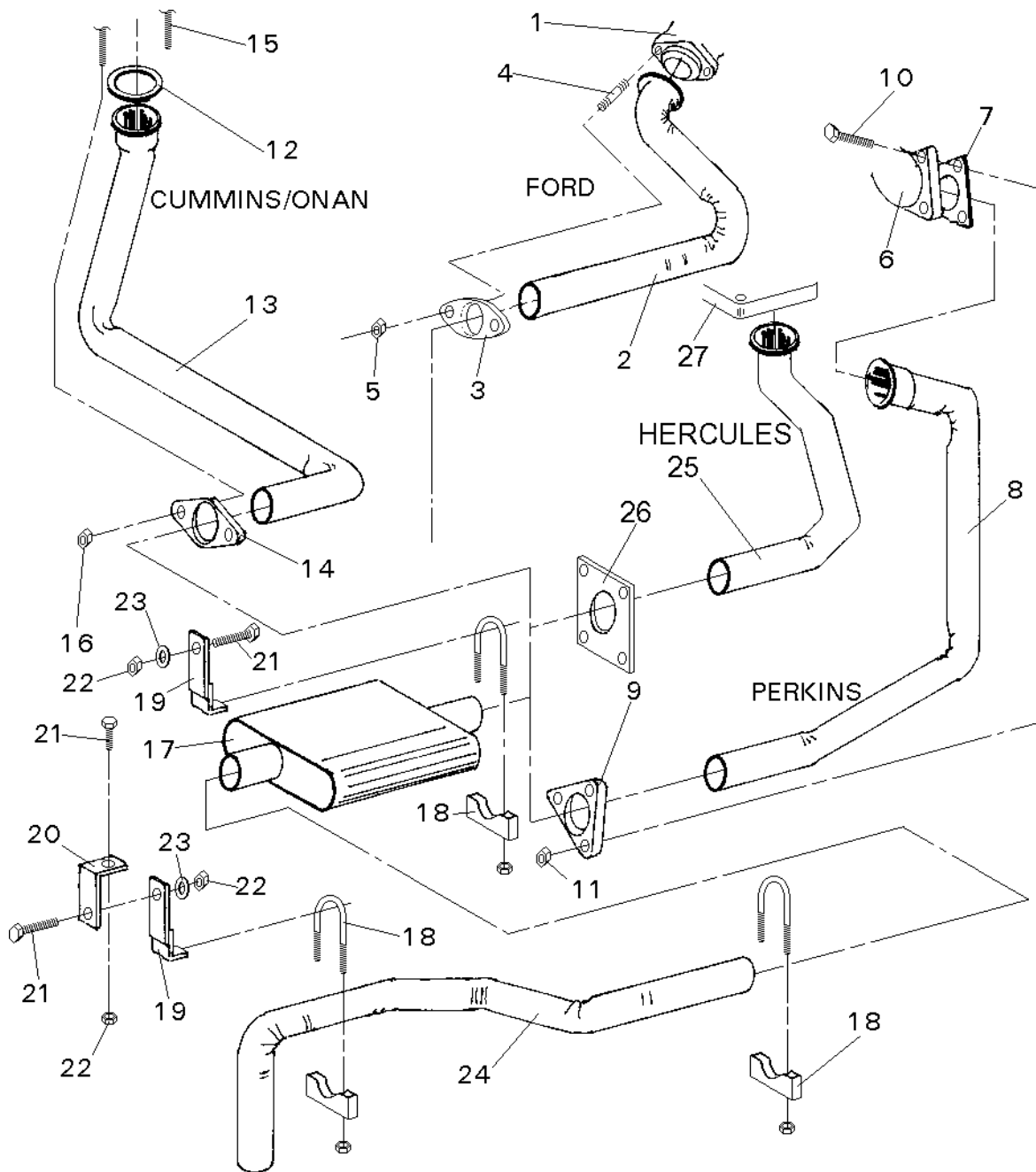
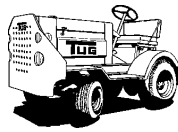


Figure 24: Exhaust System Installation

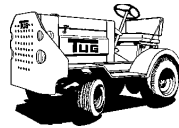


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
24-	----	-----	T6-1005-129	Exhaust System, Gas	1	362 & Up
24-1	246	d7tz-9424m	-----	exhaust manifold, 300 cid Gasoline engine	1	"
24-	246	d9tz-9a603b	T6-1001-179	Exhaust Manifold shroud	1	"
24-	246	e3tz-9439a	-----	gasket, exhaust manifold, 300 cid Gasoline engine	1	"
24-	246	d3az-9c67b	T6-1001-181	Exhaust manifold Bracket	1	"
24-2	----	-----	T6-1005-131	exhaust pipe, 300 cid Gasoline engine	1	"
	----	-----	T6-1005-125	exhaust pipe, 240 cid Gasoline engine	1	130-361
	----	-----	T6-1005-107	exhaust pipe, 240 cid Gasoline engine	1	001-129
24-	127	f17250	T6-1005-111sp	exhaust gasket, 240 cid Gasoline engine	1	001-361
24-3	256	d42a-5296aa	T6-1005-113	exhaust flange, gasoline engine	1	001 & Up
24-4	----	-----	7/16-14ncx2-1/2"	Stud, exhaust flange, gasoline engine	2	"
24-5	----	-----	7/16-14nc	locknut, exhaust flange, gasoline engine	2	"
24-6	200	37738234	-----	exhaust elbow, perkins diesel engine	1	"
24-7	22	f-7192	T6-1205-107	gasket, exhaust elbow, perkins diesel engine	2	"
24-	----	37781321	-----	exhaust manifold, perkins diesel engine	1	"
24-	110	36862159	-----	gasket, exhaust manifold, perkins diesel engine	2	"
24-	110	o826439	-----	stud, elbow, perkins diesel engine	3	"
24-	110	o576065	-----	nut, elbow, perkins diesel engine	3	"
24-	110	o920005	-----	washer, elbow, perkins diesel engine	3	"
24-8	291	-----	T6-1205-103	exhaust pipe, perkins diesel engine	1	"
24-9	110	36233431	-----	exhaust flange, perkins diesel engine	1	"
24-10	----	-----	3/8-24nfx1-1/2"	hex head bolt	3	"
24-11	----	-----	3/8-24nf	locknut	3	"
24-	----	-----	T6-7200-095	Flange, Hercules	1	"
24-	----	-----	T6-7200-101	Down Pipe	1	"
24-	----	40-3094607	-----	Gasket	1	"

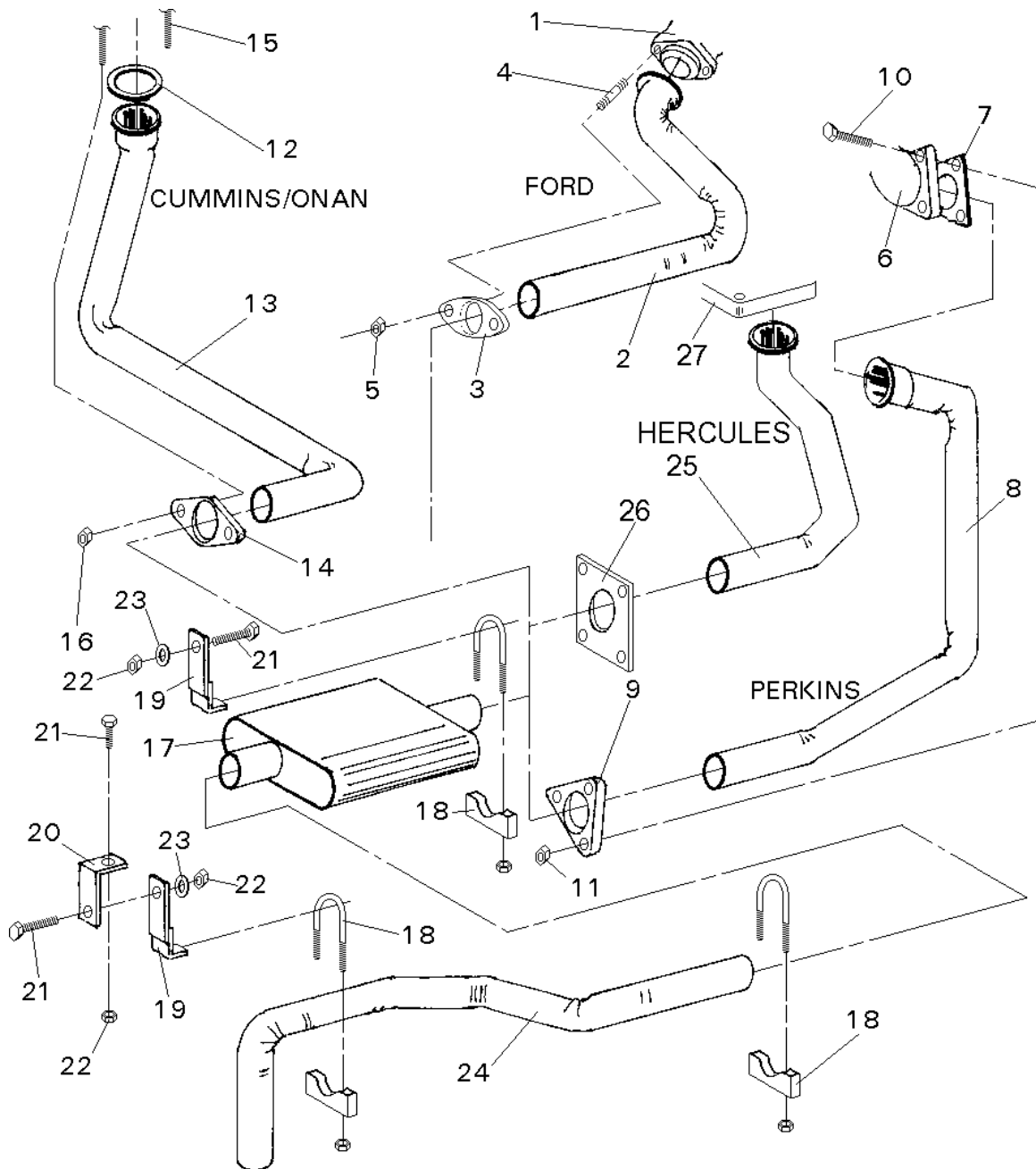
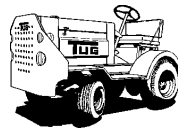


Figure 24: Exhaust System Installation

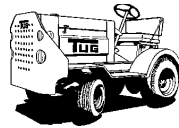


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
24-	256	co154229500	-----	exhaust manifold, cummins/onan diesel engine	1	001 & Up
24-	256	co154216200	-----	gasket, exhaust manifold, cummins/onan diesel engine	1	"
24-12	----	106	-----	gasket, exhaust pipe, cummins/onan diesel engine	1	"
24-13	----	-----	T6-3200-121	exhaust pipe, cummins/onan diesel engine	1	"
24-14	256	co155-192100	T6-3200-163	exhaust flange, cummins/onan diesel engine (obsolete)	1	"
24-15	----	-----	5/16-18ncx2-1/2"	stud, exhaust flange, cummins/onan diesel engine	2	"
24-16	----	-----	5/16-18nc	locknut, exhaust flange, cummins/onan diesel engine	2	"
24-	----	-----	T6-1000-114	Muffler, Perkins 1000-4	1	As Req'd
24-17	26	17604	T6-1005-105	muffler, 2" o.d. pipes	1	"
	26	21-578	T6-9011-320	muffler, spark arresting	1	"
24-18	296	udo200-b	T6-1005-119	muffler clamp assembly (note 1)	3	001 & Up
24-19	26	35398	T6-1005-115	exhaust hanger strap	2	"
24-20	----	-----	T6-4043-105	l-bracket, exhaust hanger	1	"
24-21	----	-----	3/8-16ncx1-1/2"	hex head bolt	3	"
24-22	----	-----	3/8-16nc	locknut	3	"
24-23	----	-----	3/8	flat washer	2	"
24-24	----	-----	T6-1005-133	tail pipe	1	362 & Up
	----	-----	T6-1005-109	tail pipe, 240 Cid gasoline engine	1	130-361
	----	-----	T6-9011-322	tail pipe, side exhaust	1	As Req'd
24-	----	-----	T6-1005-107hs	heat shield, muffler	1	"

1. Muffler clamp assembly T6-1005-119 (item 18) includes U-bolt, clamp and locknuts.

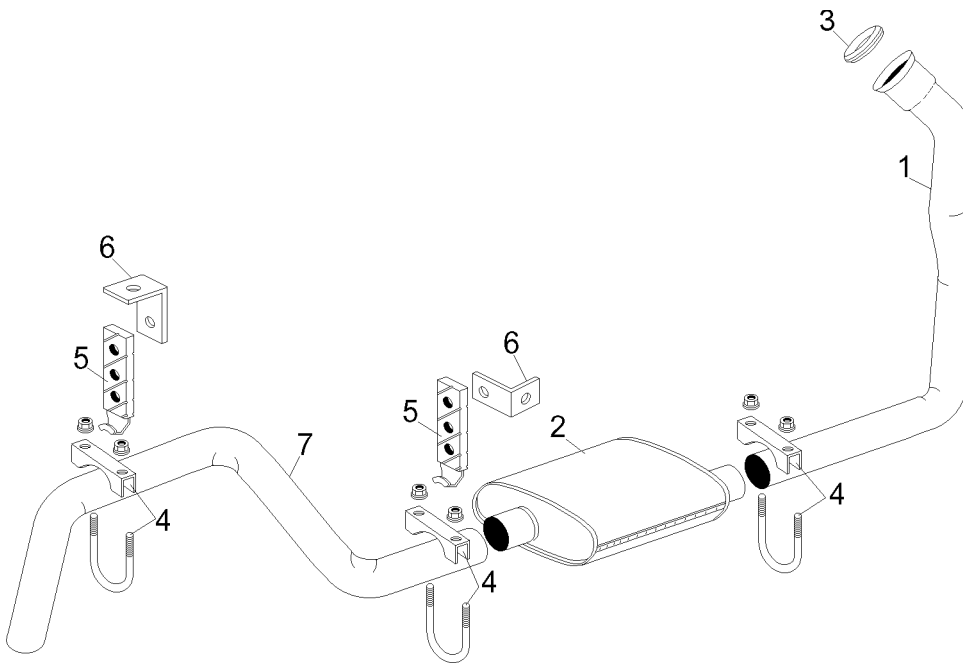
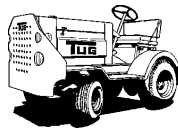


Figure 24A: Exhaust System
For Perkins 1000-4 Diesel Engine

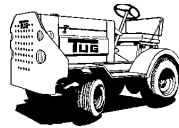
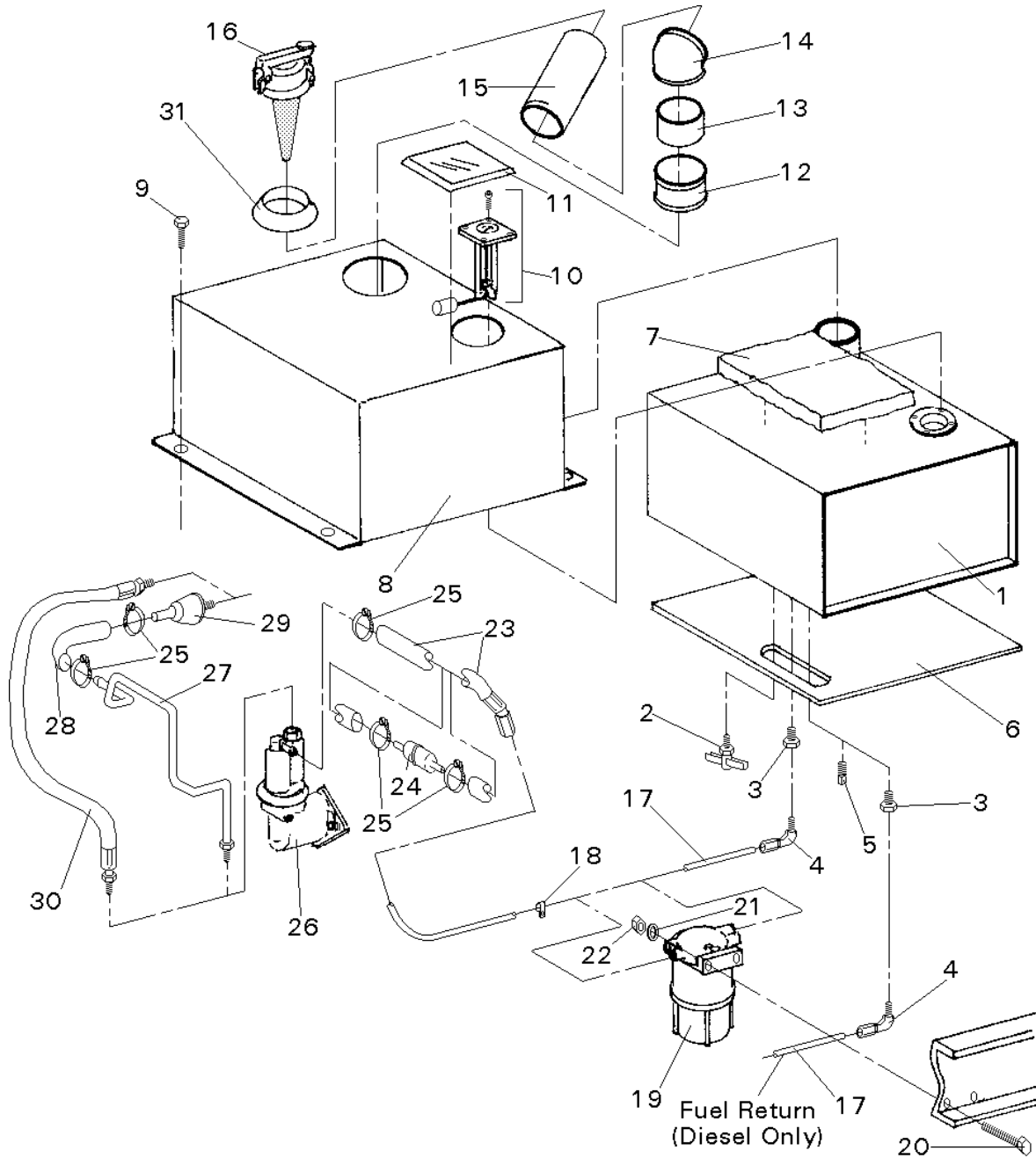
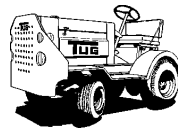


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
24a-1	291	-----	T6-1000-112	Exhaust Pipe, 1004 Perkins	1	As Req'd
24a-2	26	17713	T6-1000-114	Muffler, 2¼ 1004 Perkins	1	"
24a-3	291	-----	TM1-1-0807	Exhaust Donut	1	"
24a-4	291	-----	TM1-0-0809	Clamp, Muffler 2¼	3	"
24a-5	26	35398	T6-1005-115	Strap, Exhaust	2	"
24a-6	2	-----	T6-4043-105	L-Bracket, Exhaust	2	"
24a-7	291	-----	T6-1000-113	Tail Pipe, 1004 Perkins	1	"



**Figure 25: Fuel System Installation,
Diesel and Gasoline**

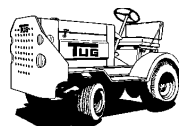
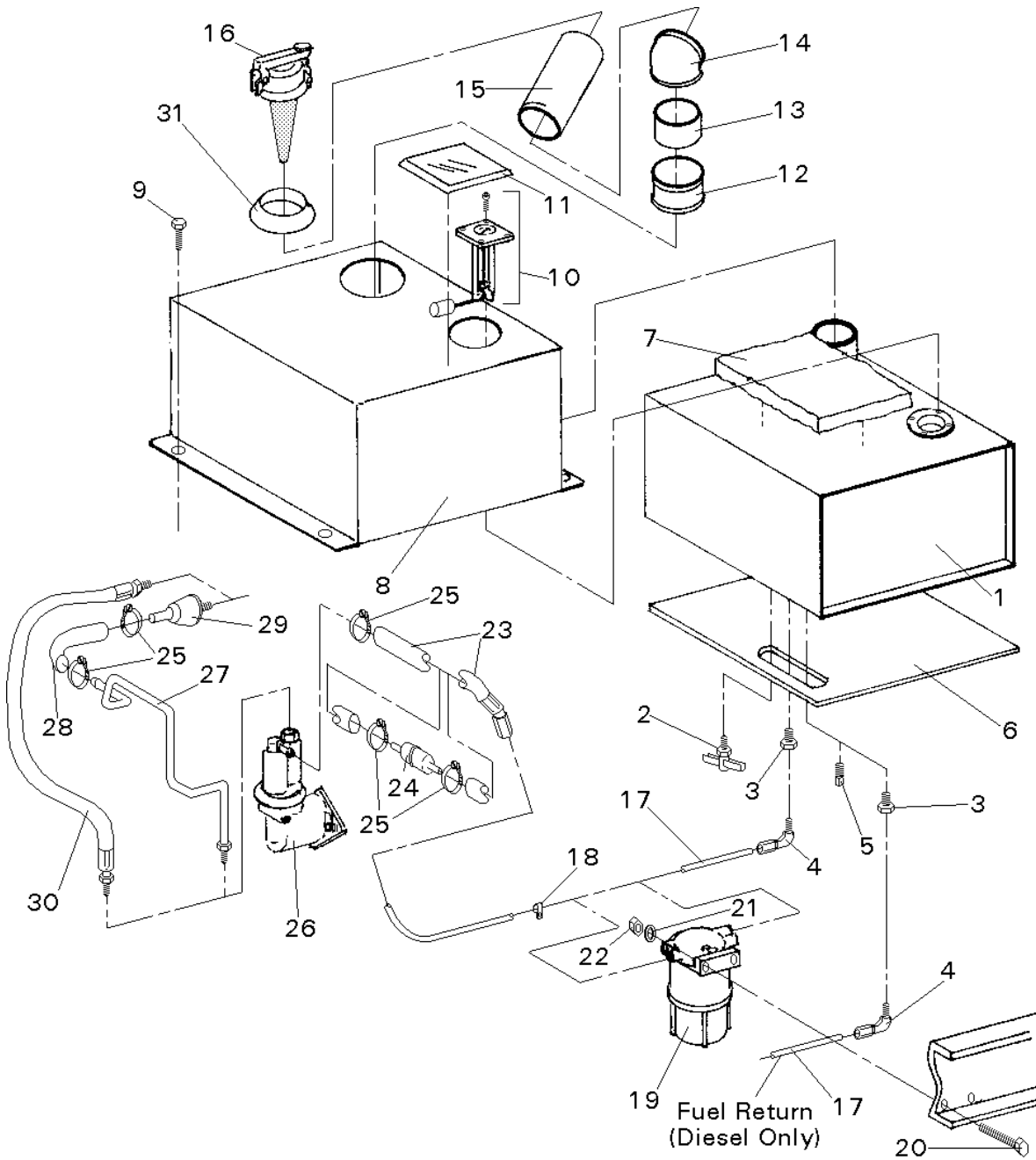
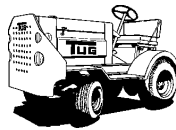


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
25-1	----	-----	T6-6009-101	fuel tank, stainless steel	1	As Req'd
	----	-----	T6-6009-201	fuel tank, polyethylene	1	"
25-2	92	6788	T6-6010-111	fuel tank drain valve	1	024 & Up
25-3	92	c3109x4x2	T6-6011-103	bushing, fuel fitting	Ref.	Note 1
25-4	92	7405x5	T6-6006-107a	elbow, 90° with nut	Ref.	"
25-5	----	-----	1/4npt	pipe plug, tapered, gasoline engine	1	"
25-6	----	-----	T6-6003-109	fuel cell padding, bottom	1	001 & Up
25-7	----	-----	T6-6003-107	fuel cell padding, top	1	"
25-8	----	-----	T6-4027-117	cover, fuel cell	1	2363 & Up
	----	-----	T6-4027-101	fuel tank cover assembly	1	024-2362
	----	-----	T6-4027-103	fuel tank cover, bottom	1	"
	----	-----	T6-4027-111	fuel tank cover, top	1	"
	----	-----	1/4-20ncx1"	hex head bolt	2	"
	79	86782	T6-4006-119	tinnerman fastener	2	"
25-9	----	-----	3/8-16ncx1"	hex head bolt	4	Note 2
	----	-----	1/4-20ncx3/4"	hex head bolt	4	"
25-10	431	6580	T6-6007-103	fuel gauge, local-reading	1	As Req'd
	131	fsa-102	x6005-101	fuel lever sender, remote reading	1	"
25-	----	-----	T6-6009-132	flange, polyethylene fuel tank to fuel sender	1	"
25-	131	mf-691-30	x6017-101	fuel gauge, remote reading	1	"
25-11	----	-----	T6-4027-113	window, fuel gauge	1	024 & Up
25-12	----	-----	cma-602	coupling, 2"	1	Note 3
25-13	----	-----	cam-601	nipple 2"x3"	1	"
25-14	----	-----	cma-603	elbow, 45°, 2"	1	"

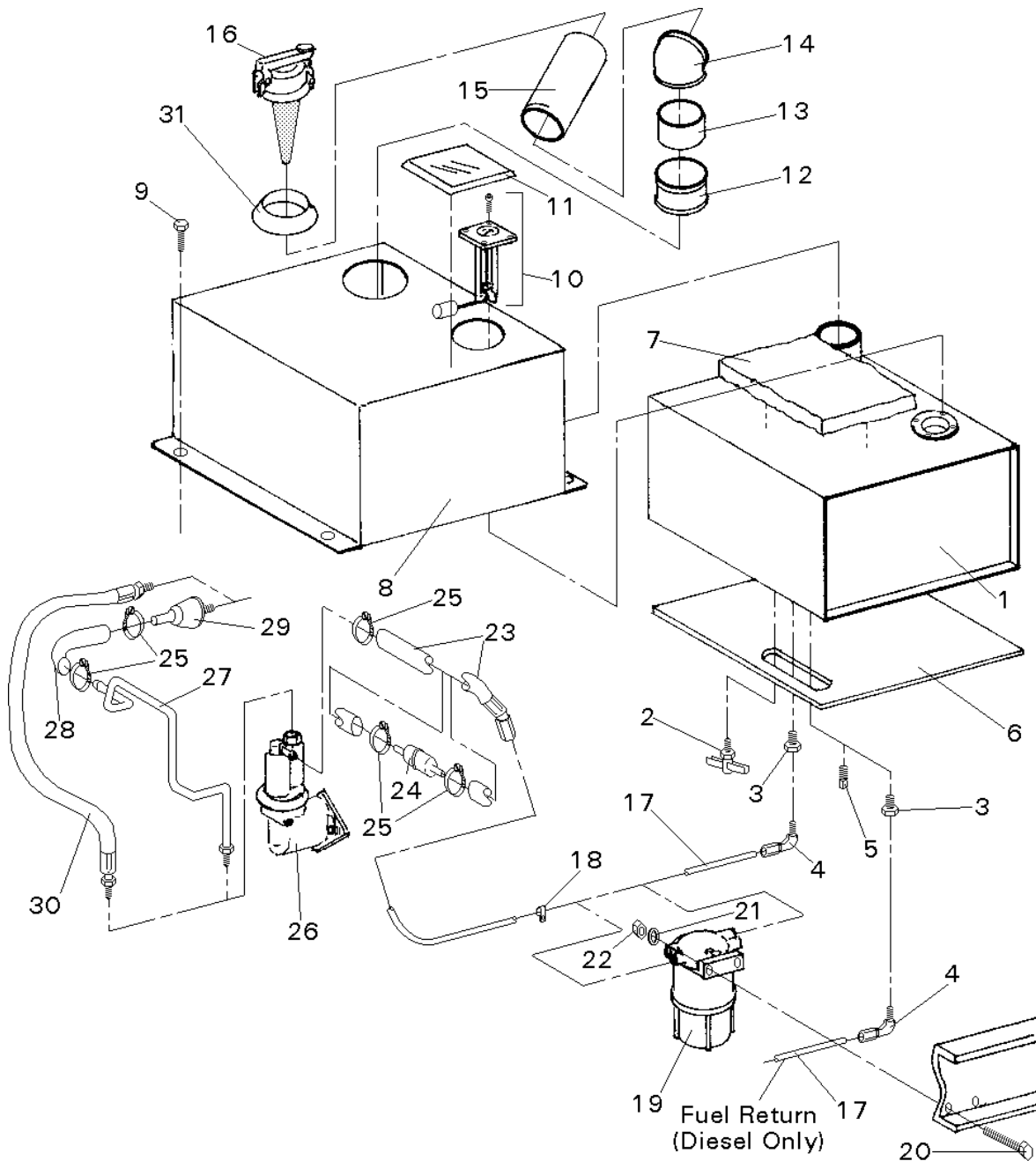
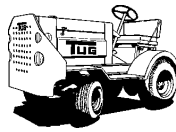


**Figure 25: Fuel System Installation,
Diesel and Gasoline**

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
25-15	----	-----	cma-600	nipple 2" x 12"	1	Note 3
	----	-----	T6-9003-502	fuel hose, 2-1/4" ID	1	"
	----	-----	#36	hose clamp	2	"
	----	-----	T6-9003-503	fuel hose pipe adapter	1	"
	----	-----	T6-9003-500	fuel filler flange tube	1	"
25-16	160	1273a6-314t	T6-6004-101	fuel filler cap, red	1	As Req'd
	----	-----	T6-6004-1015	O-Ring	1	"
	----	-----	T6-6004-101g	fuel filler cap, green	1	"
25-17	----	-----	5/16odx.o35	fuel line	Ref.	001 & Up
25-18	----	86080	-----	p-clamp	Ref.	"
25-19	110	2656088	-----	separator, pre-lift pump, perkins diesel engine	1	Note 4
	----	-----	T6-3200-139	filter assembly, pre-fuel pump, cummins/onan diesel engine	1	Note 5
	----	-----	T6-3200-139-1	filter head, pre-fuel pump, cummins/onan diesel engine	1	"
	----	-----	T6-3200-139-2	filter cartridge, pre-fuel pump, cummins/onan diesel engine	1	"
	----	-----	T6-3200-139-3	filter bracket, pre-fuel pump, cummins/onan diesel engine	1	"
	388	40-0000401	-----	fuel filter, hercules diesel engine	1	Note 8
	388	40-0026553	-----	filter head, hercules diesel engine	1	"
25-20	----	-----	3/8-16ncx2"	hex head bolt	2	As Req'd
25-21	----	-----	3/8	flat washer	2	"
25-22	----	-----	3/8-16nc	locknut	2	"
25-23	----	-----	T6-1001-501	fuel hose, 10"	1	Note 6
25-24	256	c2rz-9155a	mg-nd-622	fuel filter	1	Note 7

Fuel systems on tractors prior to serial number 024 may vary slightly.

1. 1/4" NPT tapered pipe plug (item 5) is used in place of bushing T6-6011-103 (item 3) and elbow T6-6006-107A (item 4) in third fuel tank boss on tractors with gasoline engines (no fuel return line).
2. Most early tractors are equipped with 1/4-20NCx3/4" hex head bolts; most later tractors are equipped with 3/8-16NCx1" hex head bolts.
3. Used as required on tractors equipped with cab.

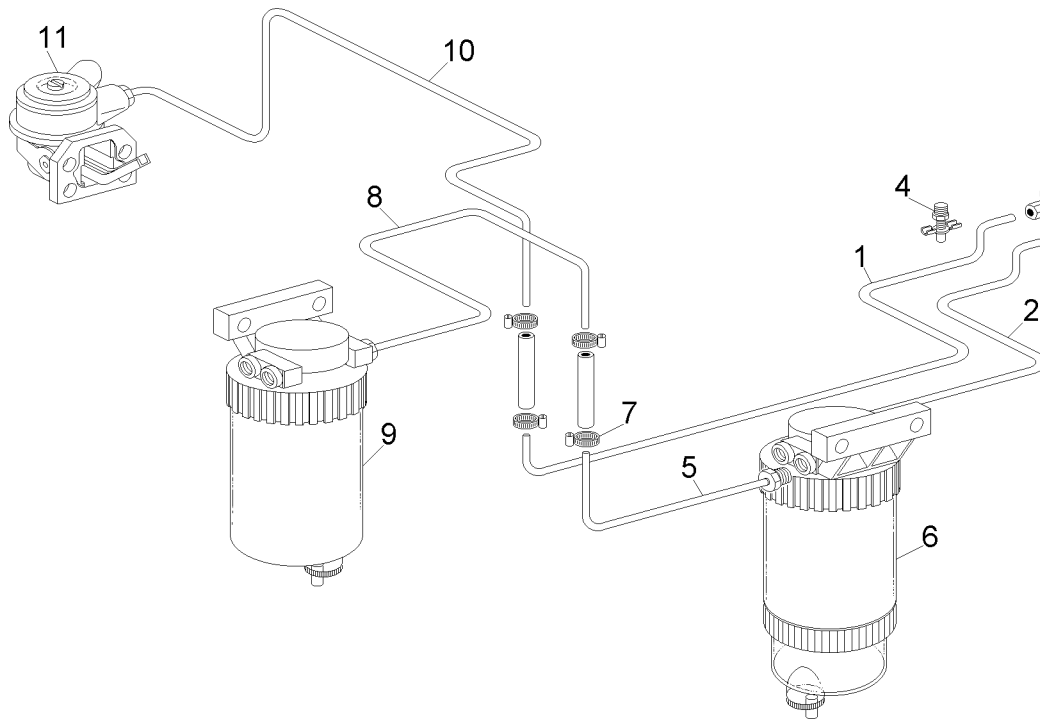
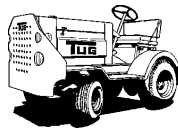


**Figure 25: Fuel System Installation,
Diesel and Gasoline**

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
25-25	----	-----	#6	hose clamp	Ref.	As Req'd
25-26	246	d7tz-9350d	-----	fuel pump (without filter)	1	Note 7
	127	6830	T6-1001-115	fuel pump (with filter)	1	"
	127	cg20	T6-1201-211	filter cartridge, fuel pump	1	"
	110	2641725	T6-1200-115	fuel pump, perkins diesel engine (use 2641728)	1	Note 4
	256	c0149206500	-----	fuel pump, cummins/Onan Diesel engine	1	Note 5
	388	40-2502653	-----	Fuel pump, electric, hercules diesel engine		Note 8
25-	----	-----	T6-9011-309	vent, fuel pump, Gasoline	1	As Req'd
25-27	246	d8te-9b27bac	T6-6005-103	fuel line, gasoline engine	1	Note 7
25-28	246	d7tz-9324e	-----	fuel line, gasoline engine	1	"
25-29	246	epgd7tz-9155e	-----	fuel inlet filter, gasoline engine	1	"
	----	-----	200x5	connector, gasoline engine	1	"
	110	2656617	-----	fuel filter, perkins diesel engine	1	Note 4
	110	26560017	-----	Cartridge kit, separator, pre-lift pump, perkins diesel engine	1	"
	----	-----	T6-1207-101	fuel filter mounting plate, perkins diesel engine	1	"
	256	c0149175500	-----	fuel filter, cummins/onan diesel engine	1	Note 5
	256	c0149175400	-----	element, fuel filter, cummins/onan diesel engine	1	"
	246	d8te-9827bac	T6-6005-103	Fuel Line, Pump to Carb	1	"
25-30	----	-----	T6-9003-509	fuel hose, gasoline engine	1	Note 7
25-31	144	r82873	T6-4027-115	collar	1	001 & Up
25-	390	62008	T6-7200-060	ether start kit	1	As Req'd
25-	----	-----	T6-7200-070	Fuel Return extension pipe	1	Note 8
25-	102	020-306	T6-7200-020	Low Fuel Switch	1	As Req'd

FUEL SYSTEMS ON TRACTORS PRIOR TO SERIAL NUMBER 024 MAY VARY SLIGHTLY.

4. Used on all tractors equipped with Perkins 4.236 diesel engine.
5. Used on all tractors equipped with Cummins/Onan diesel engine.
6. Used on all tractors equipped with Ford 300 C.I.D. gasoline engine.
7. Used as required on tractors equipped with Ford 300 C.I.D. gasoline engine.
8. Used on all tractors equipped with Hercules diesel engine.



**Figure 25A: Fuel System Installation,
Perkins 1004 Diesel**

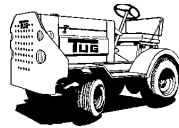
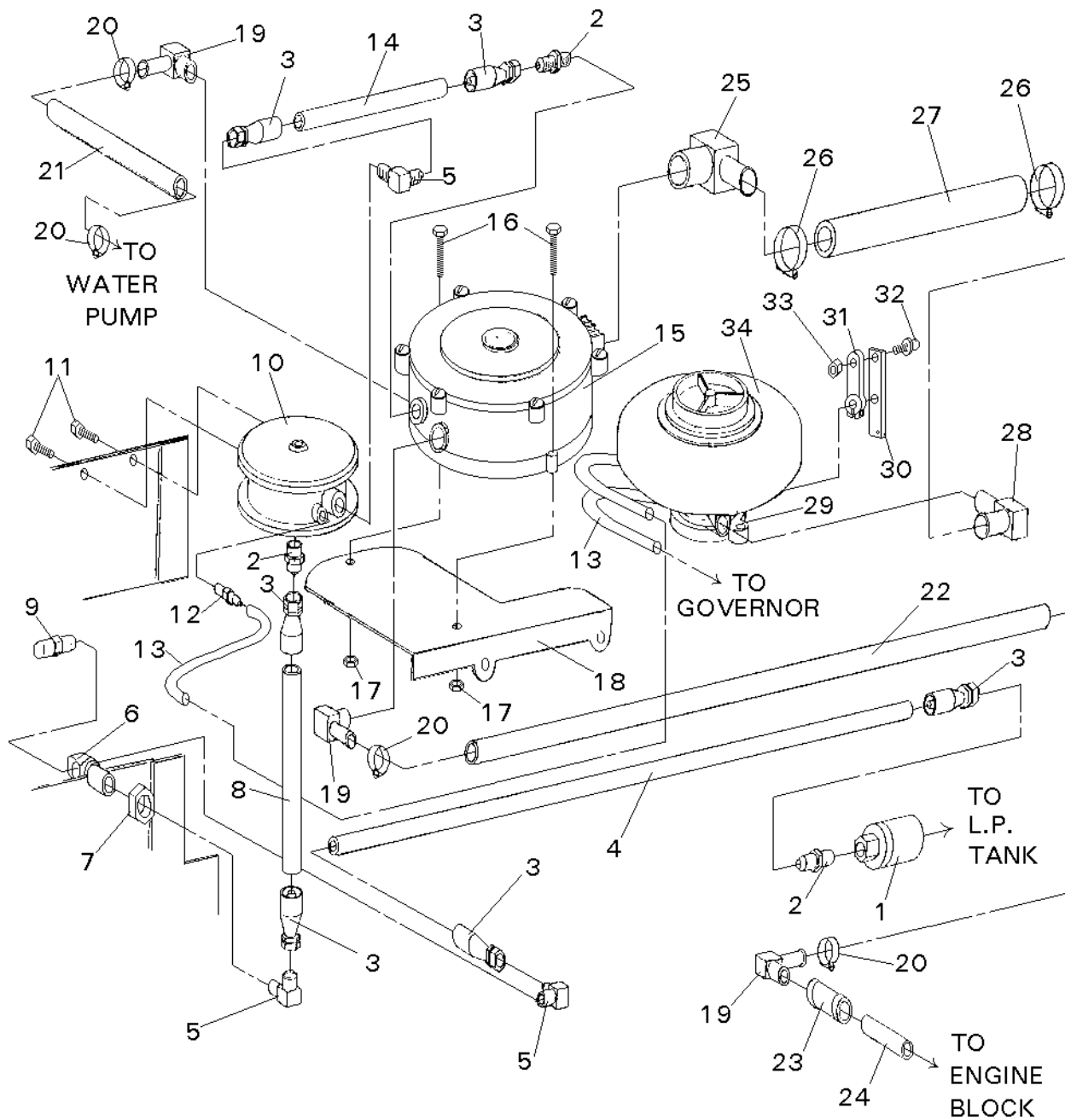
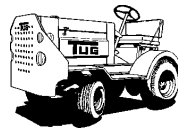


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
25a-1	----	-----	T6-6006-110	Fuel Line	1	As Req'd
25a-2	----	-----	T6-6006-111	Fuel Line	1	"
25a-3	227	7405X5	T6-6006-107A	Elbow, 90°	2	"
25a-4	227	6788	T6-6010-111	Fuel Drain Valve	1	"
25a-5	----	-----	T6-6006-112	Fuel Line	1	"
25a-6	----	656F807	-----	Pre Filter	1	"
25a-7	----	-----	#6	Hose Clamp	4	"
25a-8	----	-----	T6-6006-113	Fuel Line	1	"
25a-9	----	26560919		Fuel Filter	1	"
25a-10	----	-----	T6-6006-114	Fuel Line	1	"
25a-11	----	2641A057	-----	Fuel Pump	1	"



**Figure 26: LP Gas Delivery System
Installation**

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
26-	250	300cid	T6-6017-103	L.p. fuel kit (note 1)	1	As Req'd
26-1	250	7141f	md-w06-103	couping, l.p. tank	1	"
26-2	250	t216-4	md-h09-119	straight fitting, 6mj-4mp	3	"
26-3	250	4401-6s	-----	female swivel	6	"
26-4	----	-----	T6-6017-121	fuel line, tank to bulkhead fitting	1	"
26-5	250	149f-6-4	md-h09-115	elbow, 90°	3	"
26-6	250	t444	-----	bulkhead fitting (note 2)	1	"
26-7	----	-----	md-h09-121	jamb nut (note 2)	1	"
26-8	----	-----	T6-6017-119	fuel line, bulkhead fitting to vacuum lock-off	1	"
26-9	250	pv3865	md-h09-105	relief valve	1	"
26-10	250	vff30-2	md-hb27-115	vacuum lock-off	1	"
26-11	----	-----	1/4-20ncx1/2"	hex head bolt	2	"
26-12	250	125hb3-2	-----	hose barb	1	"
26-13	----	-----	7/32id	vacuum hose	Ref.	"
26-14	----	-----	T6-6017-123	fuel line, vacuum lock-off to converter	1	"
26-15	250	eb	MD-H12-103	l.p. gas converter	1	"
26-16	----	-----	1/4-20ncx1-1/2"	hex head bolt	2	"
26-17	----	-----	1/4-20nc	locknut	2	"
26-18	----	-----	T6-6017-105	bracket	1	"
26-19	250	473b-6	-----	elbow, 90°, water hose	3	"
26-20	----	-----	#6	hose clamp	4	"
26-21	----	-----	T6-6017-113	water hose, engine to converter	1	"
26-22	----	-----	T6-6017-111	water hose, converter to engine	1	"
26-23	----	-----	3/8"	coupling	1	"
26-24	----	-----	3/8"x2"	nipple	1	"
26-25	250	54e9	-----	elbow, 90°, vapor (large)	1	"
26-26	----	-----	#16	hose clamp	2	"

1. L.P. fuel kit T6-6017-103 includes items 1 through 15, 19 through 22, 25 through 29 and 31 through 34.
2. Bulkhead fitting T444 (item 6) includes jamb nut MD-H09-121 (item 7) flat washers and star washer.

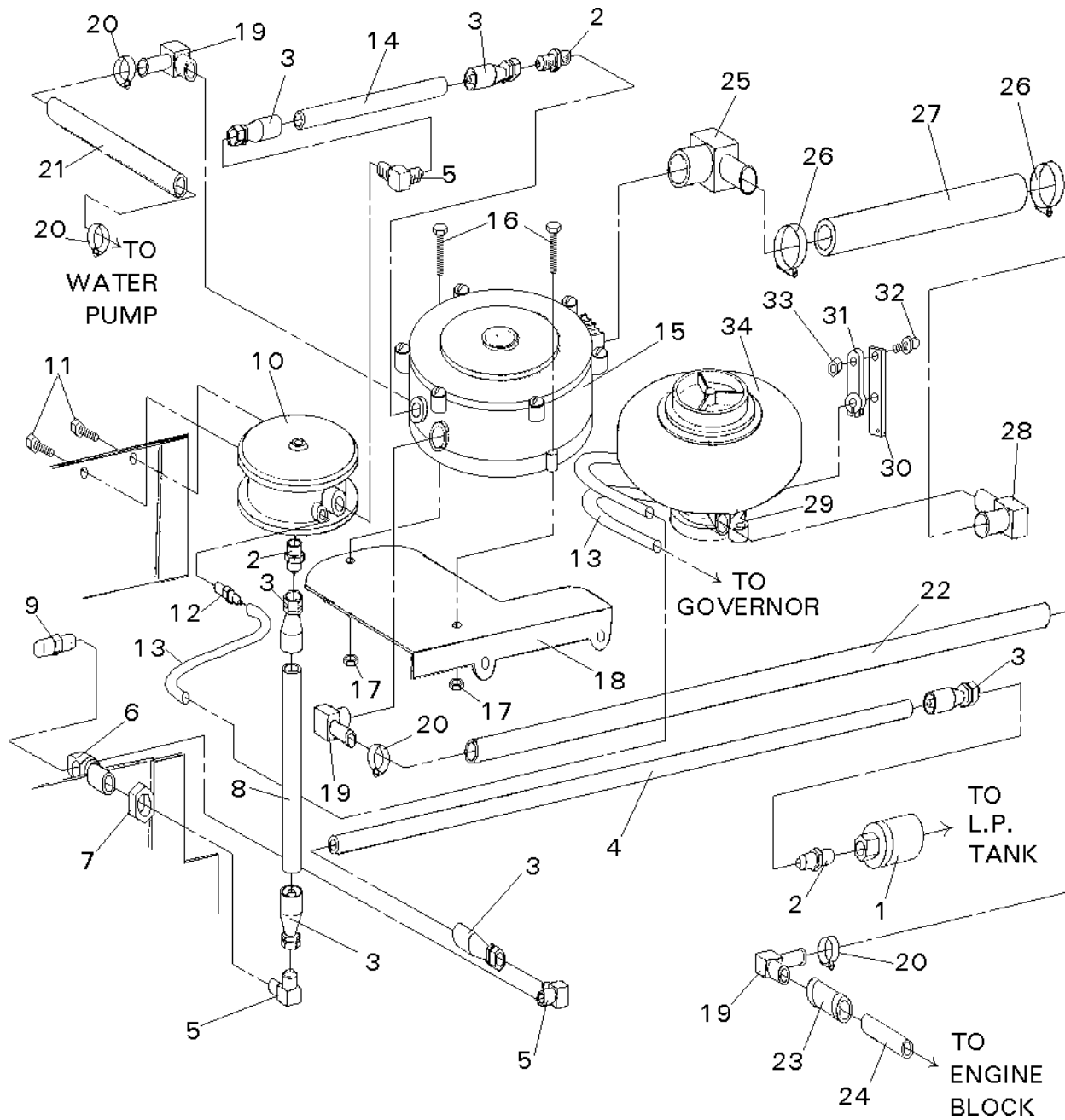
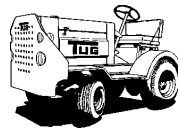


Figure 26: LP Gas Delivery System Installation

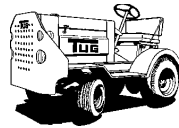
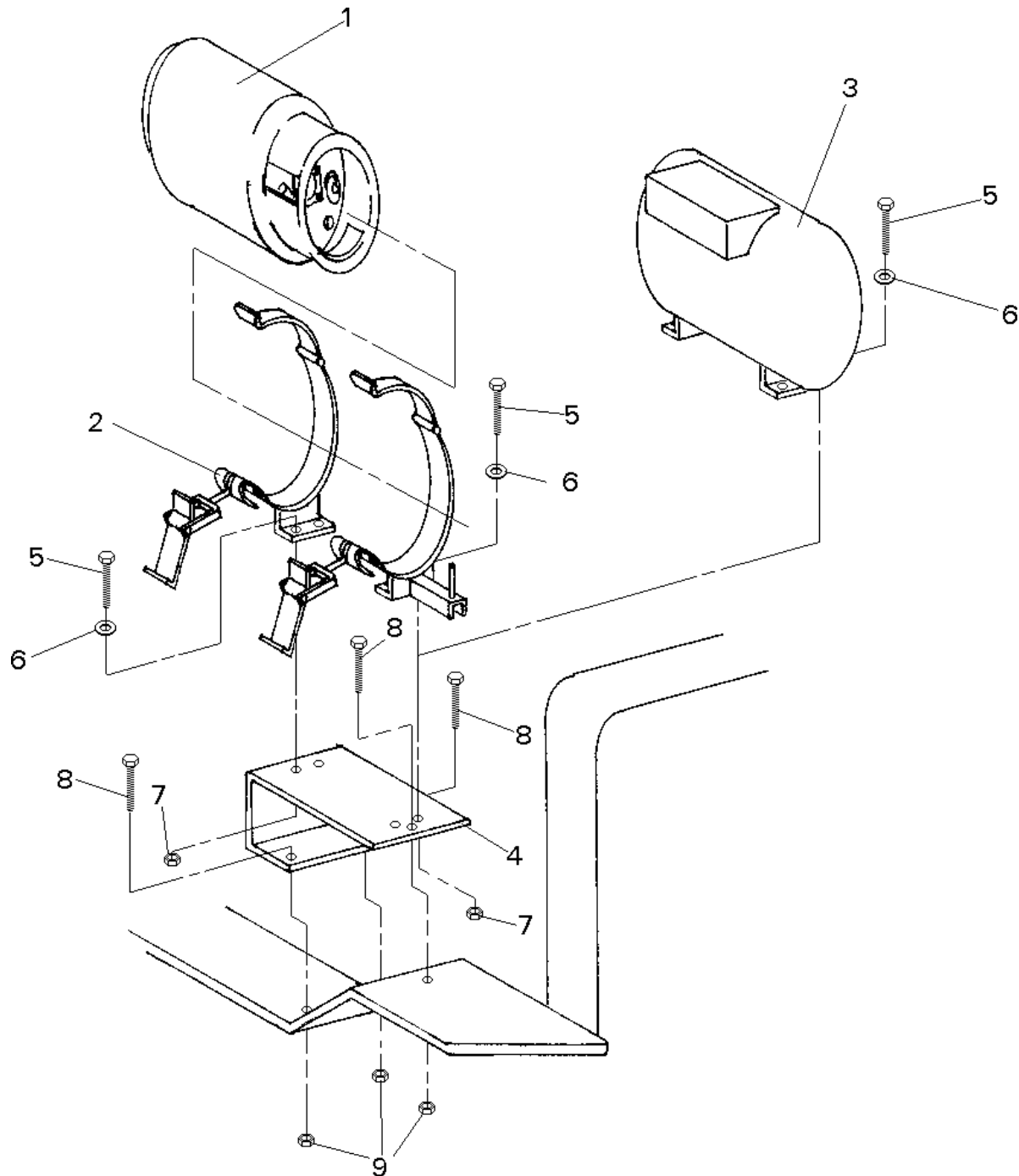
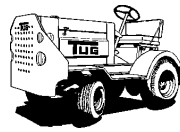


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
26-27	----	-----	T6-6017-109	vapor hose, converter to carburetor	1	As Req'd
26-28	250	53e9	-----	elbow, 90°, vapor (small)	1	"
26-29	250	ca125m-3	T6-6017-107	carburetor	1	"
26-	246	d7tz-12a450a	-----	carburetor gasket	1	"
26-30	----	-----	T6-6017-125	throttle return lever	1	"
26-31	250	al-7-2	-----	throttle lever (note 3)	1	"
26-32	79	89831	T6-1009-109	stud, accelerator cable (note 3)	1	"
26-33	----	-----	#10-32nf	locknut (note 3)	1	"
26-34	250	a2-7	-----	mixer	1	"
	----	-----	T6-1001-105	Governor	1	"

3. Throttle lever AL-7-2 (item 31) includes stud T6-1009-109 (item 32) and #10-32 locknut (item 33).



**Figure 27: LP Gas Tank
Installation**

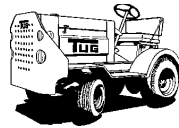
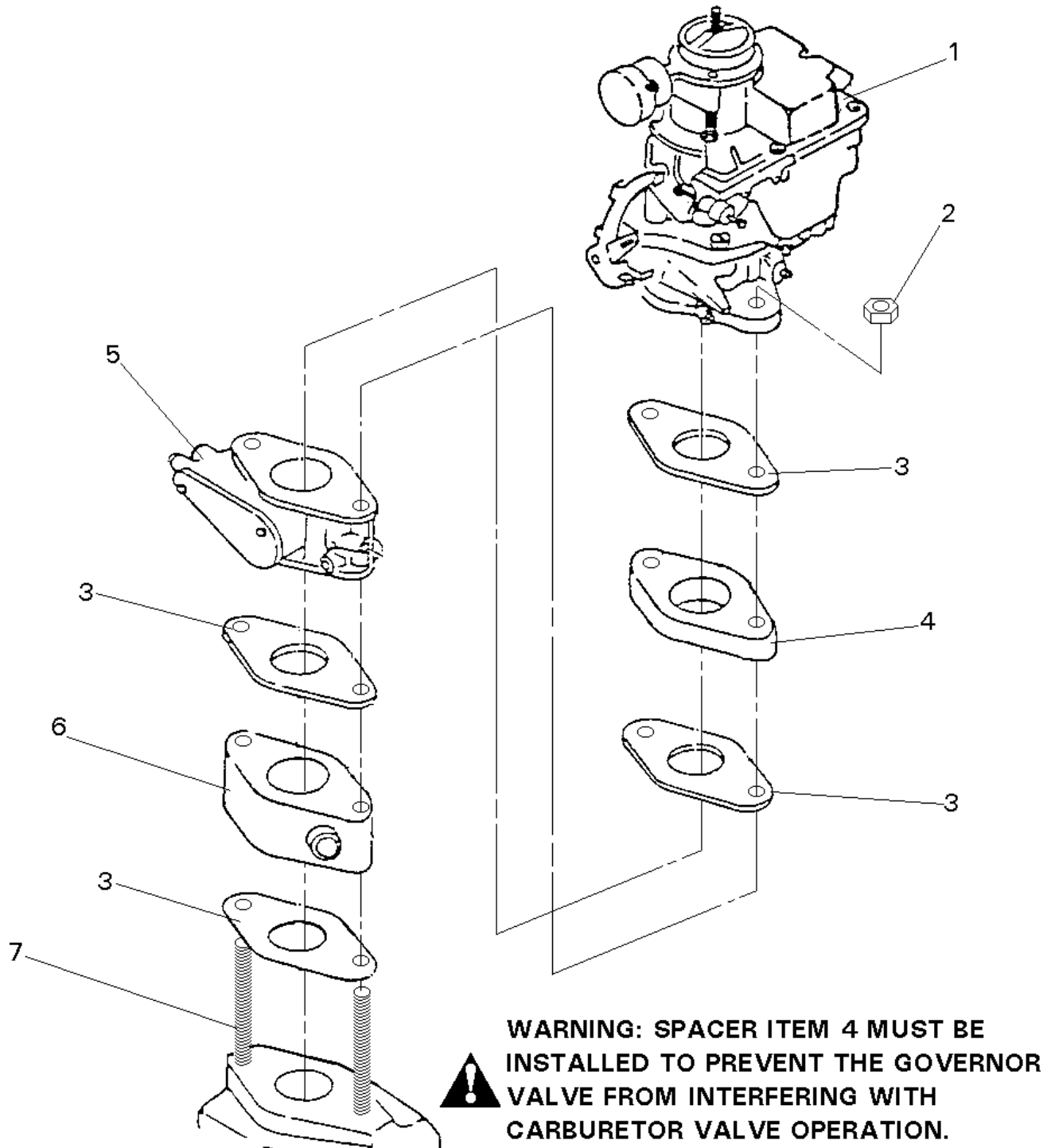
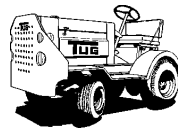


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
27-1	----	-----	mg-nd-589	l.p. tank (portable)	1	As Req'd
27-2	250	betb-2	md-w02-105	tank bracket, l.p. gas (set)	1	"
27-	250	tb25	md-w02-103	shrouded tank bracket, l.p. gas	1	"
27-3	----	-----	md-h02-107	l.p. tank (asme)	1	"
27-4	----	-----	T6-4018-113	l.p. tank stand	1	"
27-5	----	-----	3/8-16ncx1"	hex head bolt	Ref.	"
27-6	----	-----	3/8	flat washer	Ref.	"
27-7	----	-----	3/8-16nc	locknut	Ref.	"
27-8	----	-----	1/4-20cnx1"	hex head bolt	Ref.	"
27-9	----	-----	1/4-20nc	locknut	Ref.	"
27-	----	-----	mg-nd-590	fuel level sensing unit	1	"
27-	----	-----	mg-nd-591	Fuel gauge	1	"



**Figure 28: Carburetor Installation,
Ford 300 CID Engine - Gasoline and
LP Gas**

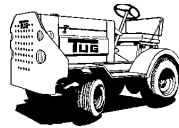


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
28-1	127	7051	T6-1001-107	carburetor, gasoline	1	As Req'd
	250	ca125m-3	-----	carburetor, l.p. gas	1	"
28-	250	a2-7	-----	mixer, l.p. gas	1	"
28-2	----	-----	3/8-24nf	locknut	2	001 & Up
28-3	246	d7jl-12a450a	T6-1001-163	carburetor gasket	4	"
28-4	246	d7jl-12a479a	-----	spacer, carburetor to governor	1	"
28-5	104	s372pe	T6-1001-105	hoof governor, oval	1	As Req'd
	370	355510	T6-9011-366	hyster governor	1	"
28-6	246	d7tz-9a589h	-----	spacer, governor to manifold	1	001 & Up
28-7	----	-----	3/8-24x3/816x5"	stud	2	"
28-	----	-----	T6-9011-247	throttle restrictor plate	1	As Req'd
28-8	246	c8dz-9654a	-----	air cleaner gasket	1	"
	----	-----	T6-1011-103	Barb Rebuild Kit	1	"
	----	c9uz-9652a	T6-1001-137	Flex Tube -Preheater	1	"
	----	napa 813-1232	T6-6017-114	5/16" x 30" steel fuel line	ref	"
	----	napa 3081	T6-6017-115	Fuel Filter	1	"
	----	-----	T6-1001-123	Spring, Throttle	1	"

SPACER ITEM 4 MUST BE INSTALLED TO PREVENT THE GOVERNOR VALVE FROM INTERFERING WITH CARBURETOR VALVE OPERATION.

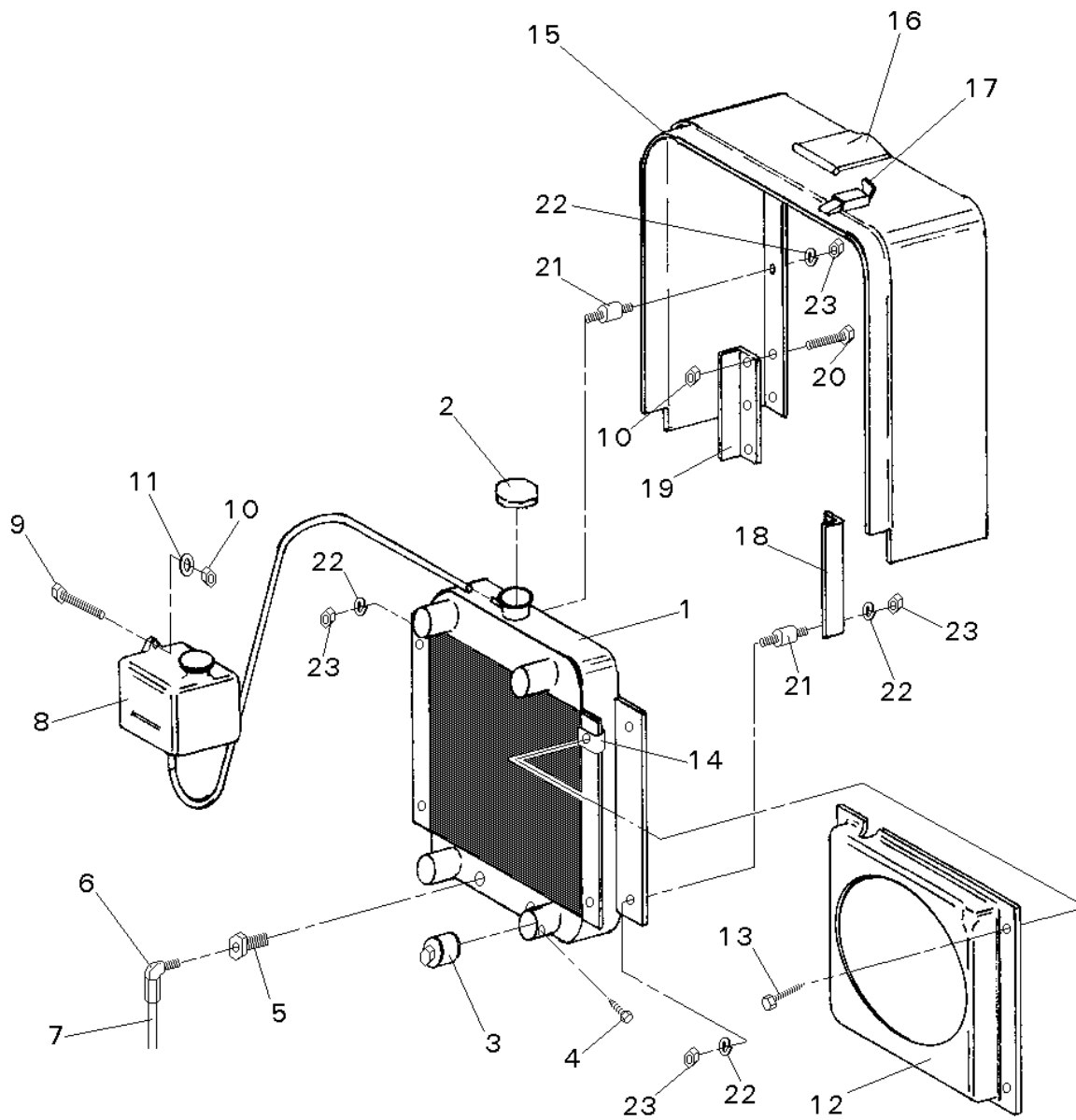
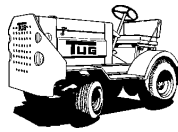


Figure 29: Radiator Installation

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
29-1	----	-----	T6-4024-101	radiator, gasoline engine	1	001-240
	----	-----	T6-4024-601	radiator, gasoline engine	1	241-296
	----	-----	T6-4055-203	radiator	1	Note 1
	----	-----	T6-4055-205	radiator with fan shroud (fex)	1	Note 2
29-2	324	agx-2641-01	md-hO4-107	radiator cap	1	001 & Up
29-3	127	620526	T6-4055-105	plug, radiator inlet/outlet	1	Note 4
29-4	----	-----	1/4x1/2"	sheet metal screw	4	"
29-5	92	c3109x4x2	T6-6011-103	bushing, coolant fitting	2	001 & Up
29-6	246	7405x5	T6-6006-107a	elbow, 90° with nut	2	"
29-7	----	-----	5/16odx.035	transmission cooling line	Ref.	"
29-8	----	-----	T6-9011-330	overflow tank with tubing	1	Note 5
29-	----	-----	T6-4055-109	Radiator Overflow Bottle W/Bracket	1	As Req'd
29-	----	-----	T6-9011-333	Overflow Tank Support	1	"
29-9	----	-----	1/4-20ncx1-1/4"	hex head bolt	1	Note 5
29-10	----	-----	1/4-20nc	locknut	Ref.	"
29-11	----	-----	1/4	flat washer	1	"
29-12	----	-----	T6-4055-207	fan shroud, gasoline engine	1	Note 3
	----	-----	T6-4001-153ns	fan shroud, gasoline engine	1	Note 4
	----	-----	T6-3200-115	Fan shroud, cummins/onan diesel engine	1	As Req'd
	----	-----	T6-4203-209	fan shroud, perkins diesel engine, frame-mounted radiator	1	"
	----	-----	T6-7200-105	Fan shroud, Hercules diesel engine	1	"
29-13	----	-----	1/4x1"	sheet metal screw	4	"
29-14	79	86782	T6-4006-119	tinnerman fastener	4	"
29-	----	-----	T6-4003-113	mounting angle, radiator shroud	2	362 & Up
29-	----	-----	T6-4055-212	Radiator Shroud Adaptor, Gas	ref	As Req'd
29-	----	-----	T6-4103-236	Radiator Shroud Hole Cover (Universal)	ref	"

1. Radiator T6-4055-203 replaces radiator T6-4055-103 (original equipment on tractors 926 through 3226) and is used on all tractors equipped with diesel engines and as required (optional equipment) on tractors equipped with gasoline engines after serial number 926 and is identified by four inlet/outlet ports.
2. Radiator T6-4055-205 is used as required (standard equipment) on tractors equipped with gasoline engines after serial number 926 and is identified by two inlet/outlet ports.
3. Used with radiator T6-4055-205.
4. Used with radiator T6-4055-203.
5. Used on all tractors equipped with gasoline engines and as required in units equipped with diesel engine.

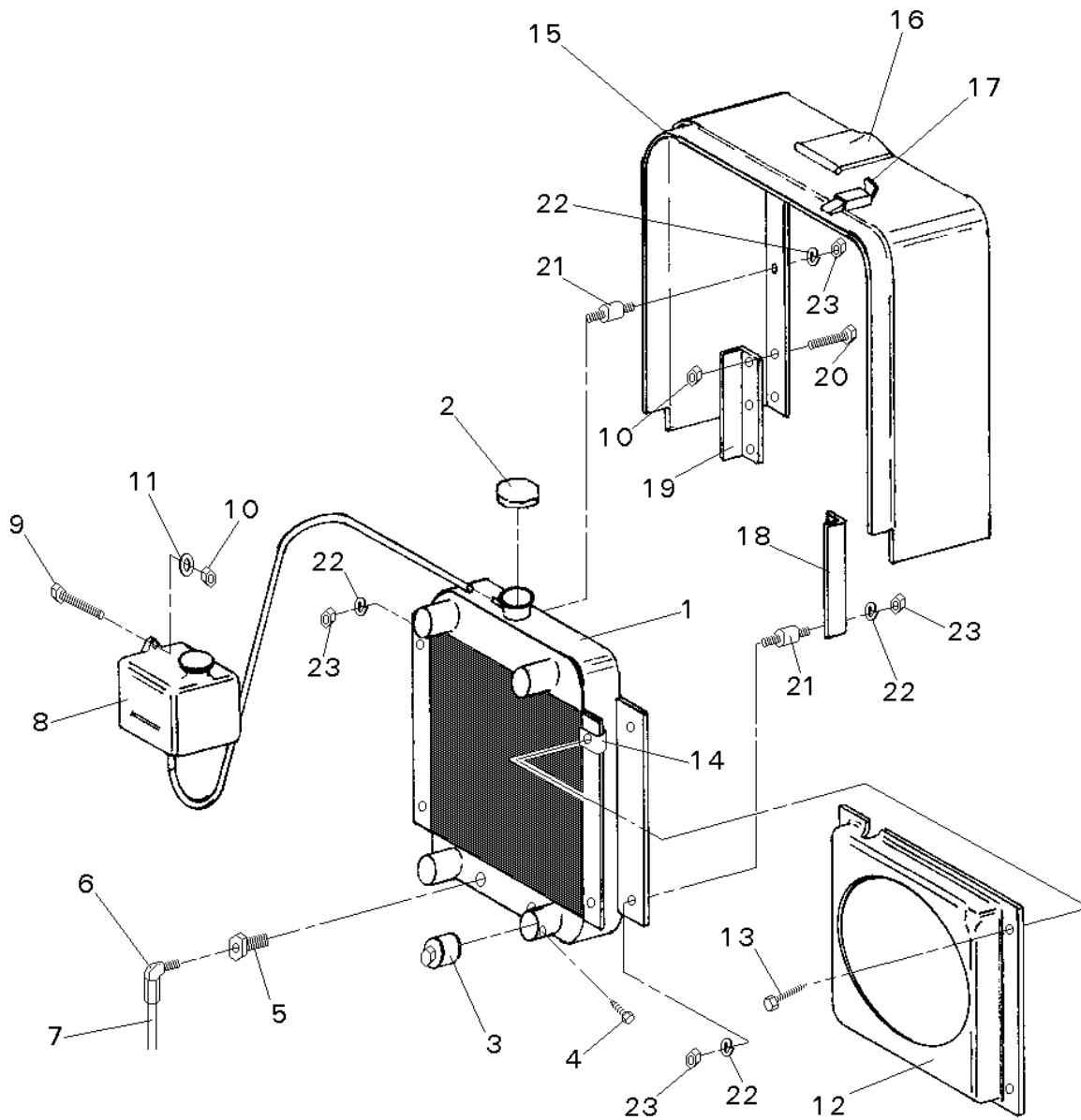
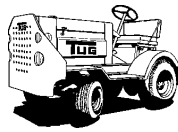


Figure 29: Radiator Installation

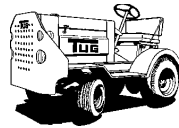


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
29-15	----	-----	T6-4003-103	radiator shroud, gas engine	1	001-097
	----	-----	T6-4003-117	radiator shroud, gas engine	1	098-361
	----	-----	T6-4103-125	radiator shroud, gas engine	1	362-926
	----	-----	T6-4103-135	radiator shroud, gas engine	1	927-2867
	----	-----	T6-4103-235	radiator shroud, gas or hercules diesel engine	1	2868 & Up
	----	-----	T6-4203-101	radiator shroud, perkins diesel engine, shroud-mounted radiator	1	As Req'd
	----	-----	T6-4203-201	radiator shroud, perkins diesel engine, frame mounted radiator	1	"
	----	-----	T6-3200-137	radiator shroud, cummins/ onan diesel engine	1	"
	----	-----	T6-4103-236	Hole Cover, Universal	1	"
29-16	----	-----	T6-4003-123	shroud hole cover	1	001 & Up
	----	-----	T6-4003-137	Magnetic Strip	1	"
29-17	----	-----	T6-4003-121	hood lock	1	"
29-18	----	-----	T6-4103-237	radiator support angle, rh, shroud-mounted, gas	1	Note 5
	----	-----	T6-4055-302	radiator support angle, rh, frame-mounted, gas	1	Notes 4,5
	----	-----	T6-4055-306	radiator support angle, rh, frame-mounted, gas	1	Notes 3,5
	----	-----	T6-4203-205	support angle, Rh, Perkins or Hercules frame-mounted radiator	1	As Req'd
29-19	----	-----	T6-4103-239	support angle, lh, shroud-mounted radiator, gas	1	Note 5
	----	-----	T6-4055-301	support angle, lh, frame-mounted radiator, gas	1	Notes 4,5
	----	-----	T6-4055-305	support angle, lh, frame-mounted radiator, gas	1	Notes 3,5
	----	-----	T6-4203-203	support angle, lh, perkins or Hercules frame-mounted radiator	1	As Req'd

3. Used with radiator T6-4055-205.

4. Used with radiator T6-4055-203.

5. As required on units equipped with gasoline engines from serial number 2868.

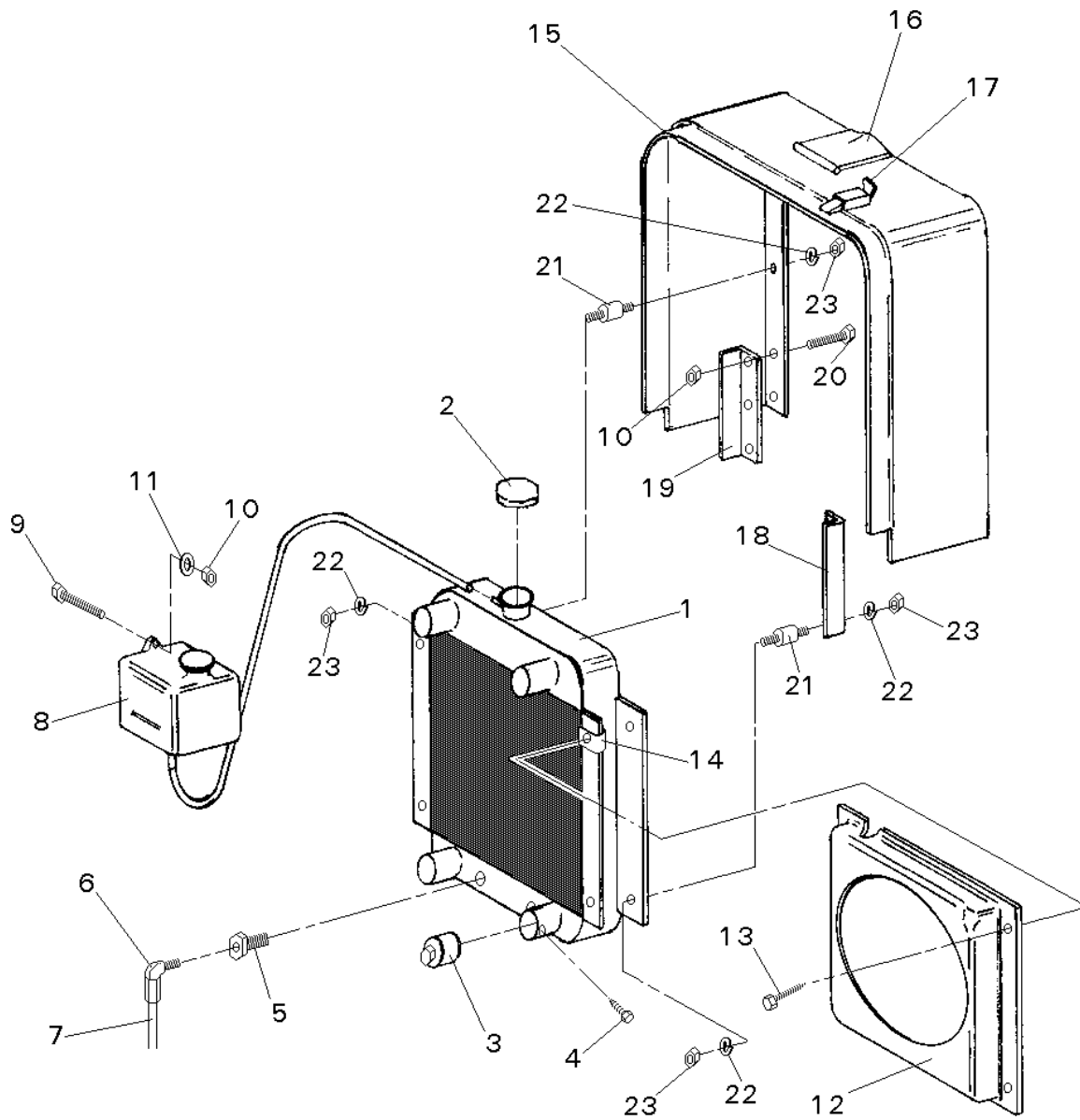
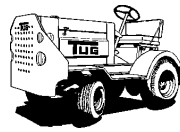


Figure 29: Radiator Installation

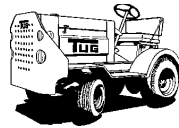
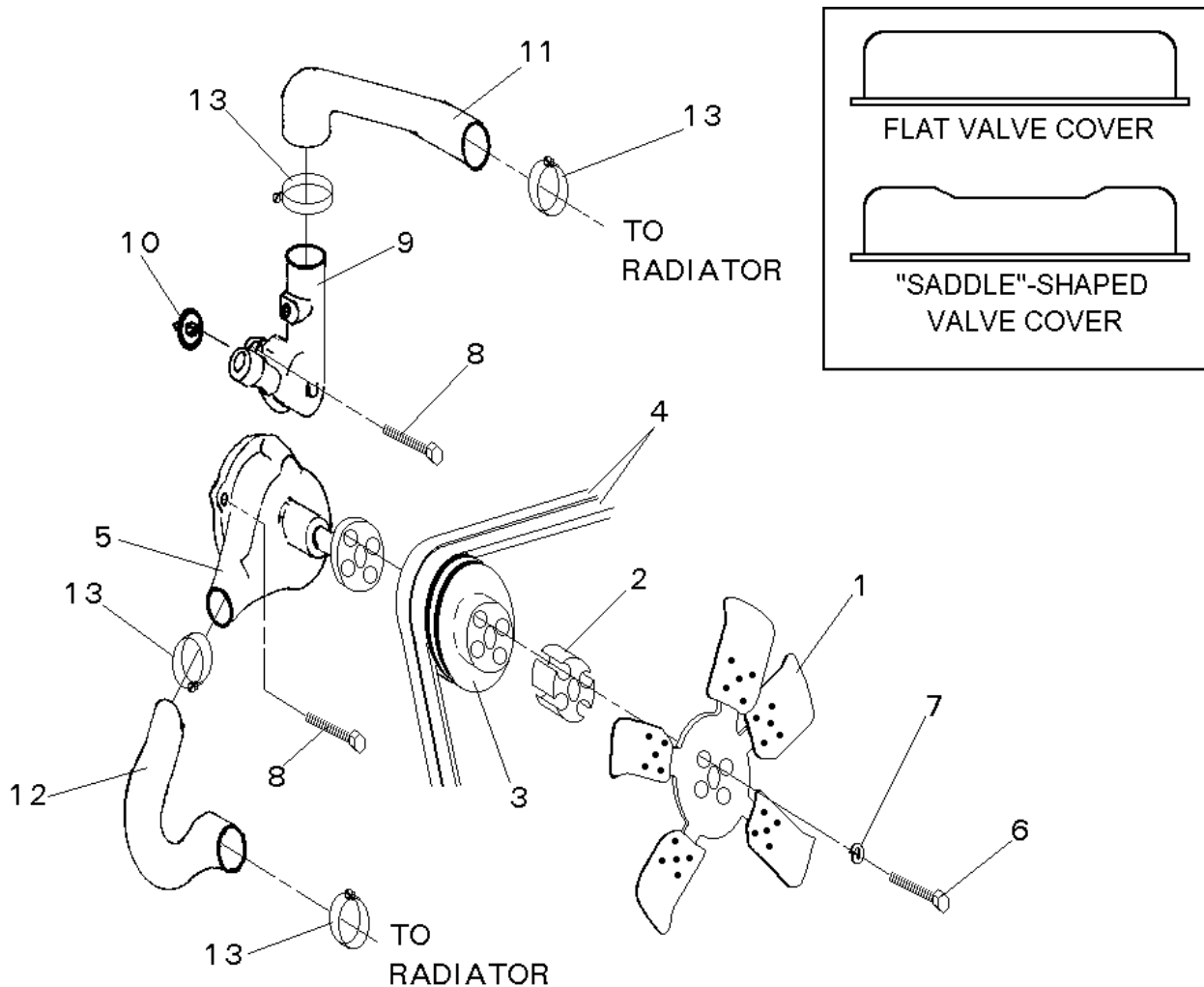
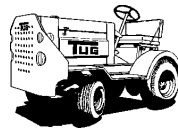


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
29-20	-----	-----	1/4-20ncx1"	hex head bolt	4	As Req'd
29-21	-----	-----	T6-4055-209	rubber mount, radiator	4	Note 3
	16	2281	T6-9011-239	grommet	4	Note 4
	293	.250idx.375od	T6-9011-237	bushing, metal (.312 long)	4	"
	-----	-----	T6-4121-109	spacer, top, radiator mount	1	"
29-22	-----	-----	5/16	lock washer	8	Note 3
	-----	-----	1/4	flat washer	4	Note 4
29-23	-----	-----	5/15-18nc	locknut	8	Note 3
	-----	-----	1/4-20ncx1-3/4"	hex head bolt (top)	2	Note 4
	-----	-----	1/4-20ncx1"	hex head bolt (bottom)	2	"
	-----	-----	1/4-20nc	locknut	4	"
29-	-----	-----	T6-9011-368	bypass fitting, gasoline engine, low mount fan	1	As Req'd
29-	-----	-----	T6-9011-369	bypass hose, gasoline engine, low mount fan	1	"
29-	-----	-----	T6-9011-370	hose, pcv valve to manifold gasoline engine, low mount fan	1	"
29-	-----	-----	T6-9011-371	hose, breather vent to air cleaner, gasoline, low mount fan	1	"
29-	246	ev-127	T6-9011-372	pcv valve, gasoline engine, low mount fan	1	"
29-	-----	-----	T6-9011-373	y-fitting, heater hose, gasoline engine, low mount fan	1	"

3. Used with radiator T6-4055-205.

4. Used with radiator T6-4055-203.



**Figure 30: Fan and Water Pump
Installation - Gasoline Engine**



WARNING: THE BYPASS HOLES IN THE WATER OUTLET (ITEM 9) AND THE HEAD MUST MATCH EXACTLY. INSTALLATION OF THE INCORRECT WATER OUTLET HOUSING WILL RESULT IN INSUFFICIENT GASKET SEATING AND SUBSEQUENT LOSS OF ENGINE COOLANT WHICH CAN RESULT IN ENGINE DAMAGE AND SERIOUS PERSONAL INJURY.

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
30-1	256	D2JL-8600B	T6-7002-131	Fan, Low Mount	1	2868 & Up
	256	c5jz-8600n	MH-ND-440	Fan, High Mount	1	001-2867
30-2	246	epgd005z-8546b	-----	fan spacer	1	6563 & Up
30-3	246	c6az-8509I	T6-7002-127	water pump pulley	1	001-6562
	246	epgetz-8509b	-----	water pump pulley	1	6563 & Up
30-	246	e5jl-8625ba	T6-1001-193	fan pulley and bracket assembly, high mount fan	1	001-2867
30-4	127	15445	T6-9011-151	water pump/alternator belt	Ref.	As Req'd
30-	127	l444	660-1-1139	fan belt, high mount fan	1	001-2867
30-	-----	-----	T6-1001-195	Guide, Fan Bracket	1	As Req'd
30-	-----	-----	T6-1001-197	Stud	1	As Req'd
30-5	246	e9pz-8501b	-----	water pump	1	001-6562
	246	f3je-8501aa	T6-4055-501	water pump	1	6563 & Up
30-	256	c5az-8507a	-----	gasket, water pump	1	001 & Up
30-6	-----	-----	5/16-24nfx2"	hex head bolt	4	"
30-7	-----	-----	5/16	lock washer	4	"
30-8	-----	-----	5/16-18ncx1"	hex head bolt	6	"
30-9	246	e7tz-8592a	T6-4055-503	water outlet, low mount fan	1	Note 1
	246	e0tz-8592b	-----	water outlet, low mount fan	1	"
	246	e5jl-8592aa	T6-1001-191	water outlet, high mount fan	1	001-2867
30-10	246	c5te-8575b	-----	thermostat, 180°	1	As Req'd
30-	246	eagc5te-8575b	-----	thermostat, 160°	1	As Req'd
30-	-----	-----	T6-4255-110	Hose, Radiator Upper & Lower MA-13	1	As Req'd
30-	256	E6JE-6316AA	T6-7002-129	Harmonic Balancer (Himount Crankshaft Pulley)	1	"
30-	243	C5JZ-6A312A	T6-1001-199	Pulley, Crankshaft (Himount)	1	"

1. Water outlet E0TZ-8592B is used on gasoline engines with 1/2" diameter water port (engines manufactured through 1985 with cast rocker arms and flat valve covers - see insert in FIGURE 30). Water outlet E7TZ-8592A is used on engines with 3/4" diameter water port (engines manufactured after 1985 with stamped rocker arms and "saddle"-shaped valve covers - see insert in FIGURE 30). SEE WARNING BELOW.

THE BYPASS HOLES IN THE WATER OUTLET (ITEM 9) AND THE HEAD MUST MATCH EXACTLY. INSTALLATION OF AN INCORRECT WATER OUTLET WILL RESULT IN INSUFFICIENT GASKET SEATING AND SUBSEQUENT LOSS OF ENGINE COOLANT WHICH CAN RESULT IN ENGINE DAMAGE AND SERIOUS PERSONAL INJURY.

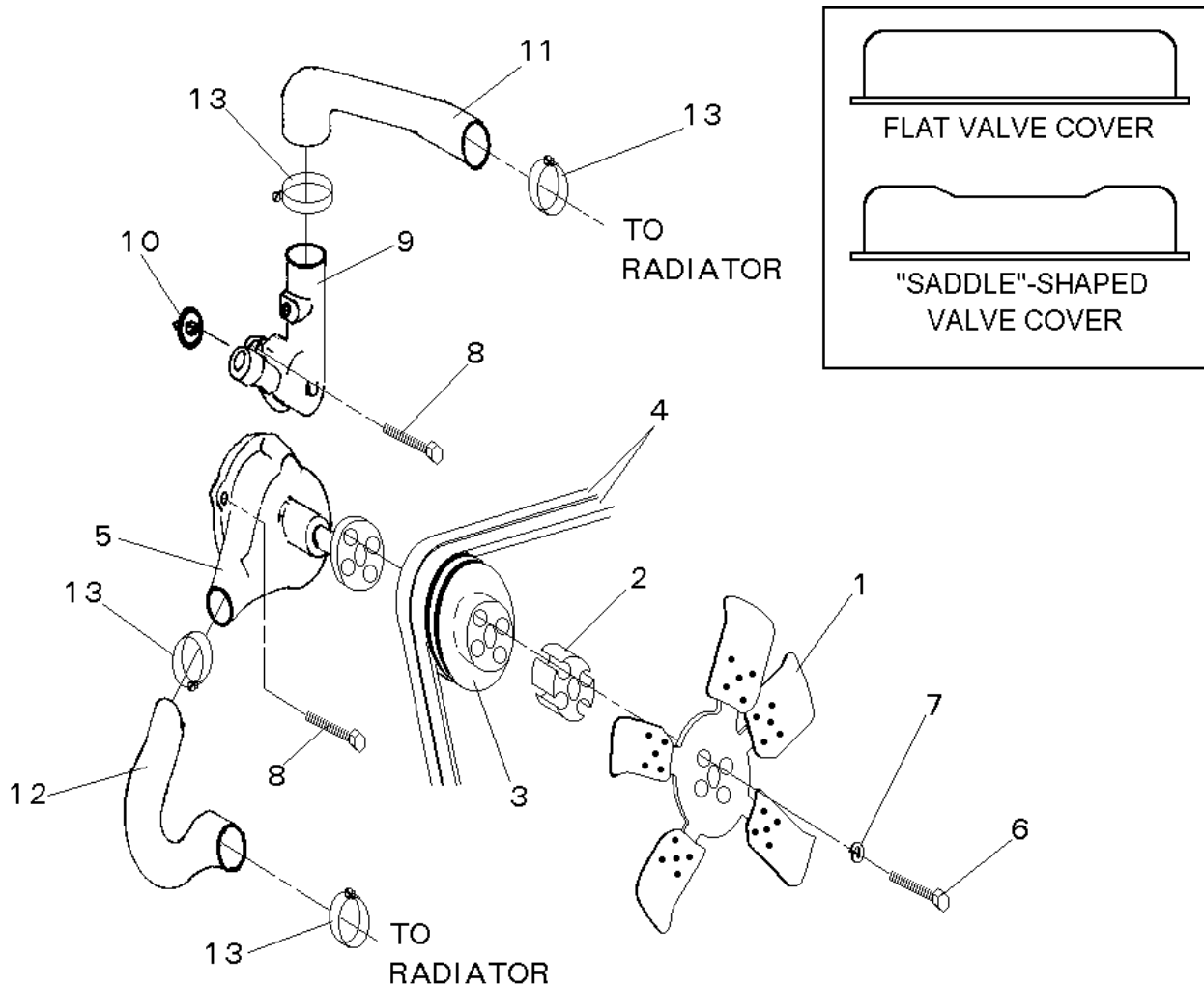
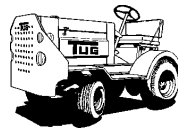


Figure 30: Fan and Water Pump Installation
- Gasoline Engine



WARNING: THE BYPASS HOLES IN THE WATER OUTLET (ITEM 9) AND THE HEAD MUST MATCH EXACTLY. INSTALLATION OF THE INCORRECT WATER OUTLET HOUSING WILL RESULT IN INSUFFICIENT GASKET SEATING AND SUBSEQUENT LOSS OF ENGINE COOLANT WHICH CAN RESULT IN ENGINE DAMAGE AND SERIOUS PERSONAL INJURY.

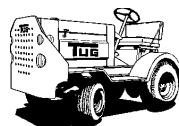


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
30-	246	e6tz-8255b	-----	Gasket, Water outlet, low mount fan (note 1)	1	2868 & Up
	246	c5jz-8255a	-----	Gasket, Water outlet, high mount fan	1	001-2867
30-11	127	70481	T6-6014-101	upper radiator hose, Low mount fan (NOTE 2)	1	2868 & Up
	127	70638	T6-1024-105	upper radiator hose, high mount fan (NOTE 2)	1	241-2867
30-12	127	70638	T6-1024-105	lower radiator hose, low mount fan (NOTE 2)	1	2868 & Up
	256	c5jz-8286d	T6-4024-107	lower radiator hose, high mount fan (NOTE 2)	1	001-2867
30-13	----	-----	#28	hose clamp	4	001 & Up
30-	246	c5jz-6a312a	T6-1001-199	crank shaft pulley, high mount fan	1	001-2867
30-	----	-----	3/4mp-3/8fp	bushing, water temperature sensing unit	1	As Req'd
	371	0202400	T6-1001-201	water temperature sensing unit	1	"
	----	-----	3/4mp	pipe plug	1	"
30-	371	104680	T6-7010-153	water temperature gauge	1	"
30-	----	-----	T6-9011-368	bypass fitting, coolant bypass system, low mount fan	1	"
30-	----	-----	T6-7200-110	Lower Hose, Hercules	1	"
30-	----	-----	T6-7200-115	Upper Hose, Hercules	1	"

1. Water outlet E0TZ-8592B is used on gasoline engines with 1/2" diameter water port (engines manufactured through 1985 with cast rocker arms and flat valve covers - see insert in FIGURE 30). Water outlet E7TZ-8592A is used on engines with 3/4" diameter water port (engines manufactured after 1985 with stamped rocker arms and "saddle"-shaped valve covers - see insert in FIGURE 30). SEE WARNING BELOW.
2. Radiator hoses may require cutting to obtain proper length.

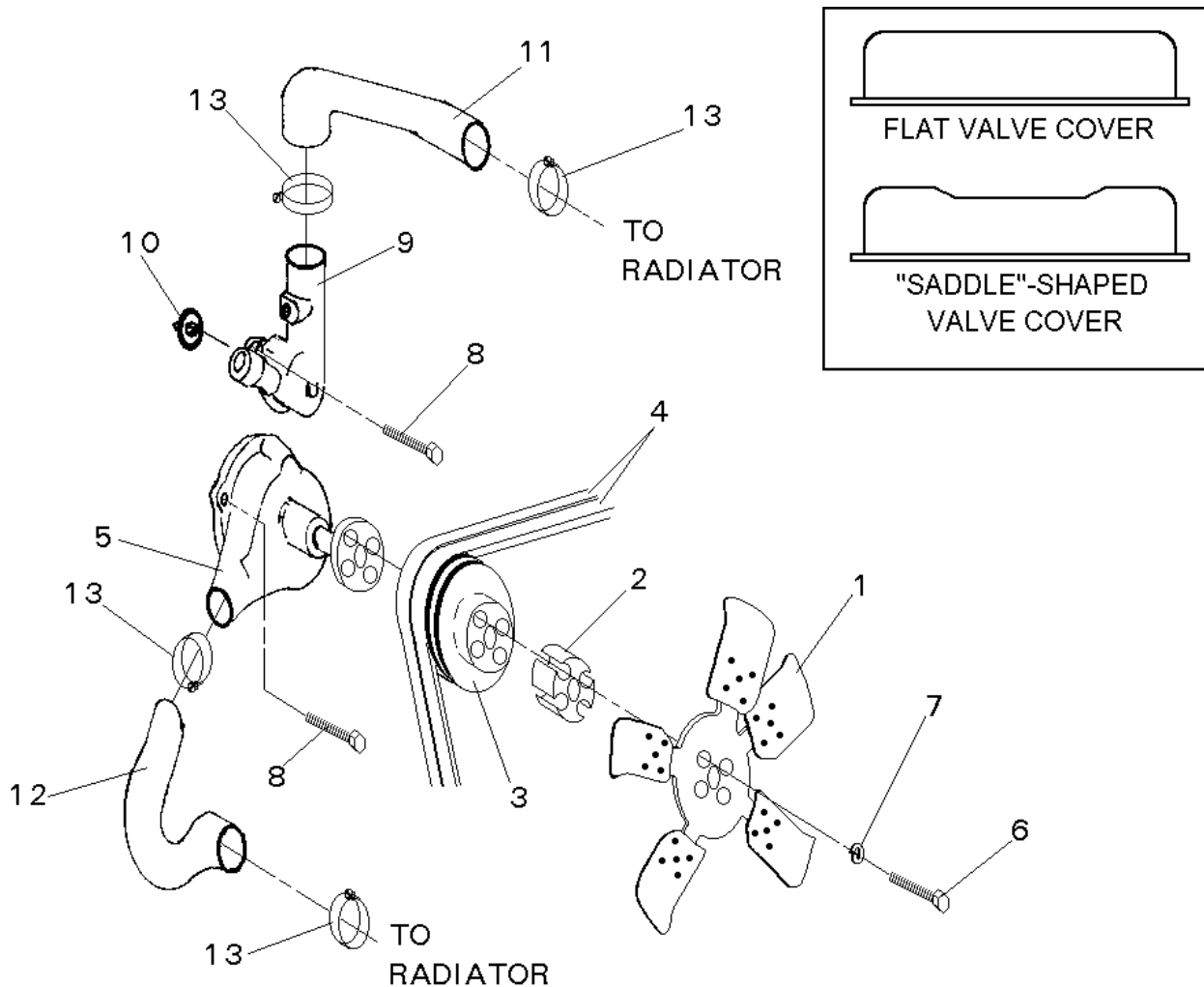
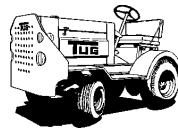


Figure 30: Fan and Water Pump Installation
- Gasoline Engine



WARNING: THE BYPASS HOLES IN THE WATER OUTLET (ITEM 9) AND THE HEAD MUST MATCH EXACTLY. INSTALLATION OF THE INCORRECT WATER OUTLET HOUSING WILL RESULT IN INSUFFICIENT GASKET SEATING AND SUBSEQUENT LOSS OF ENGINE COOLANT WHICH CAN RESULT IN ENGINE DAMAGE AND SERIOUS PERSONAL INJURY.

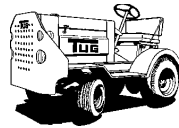
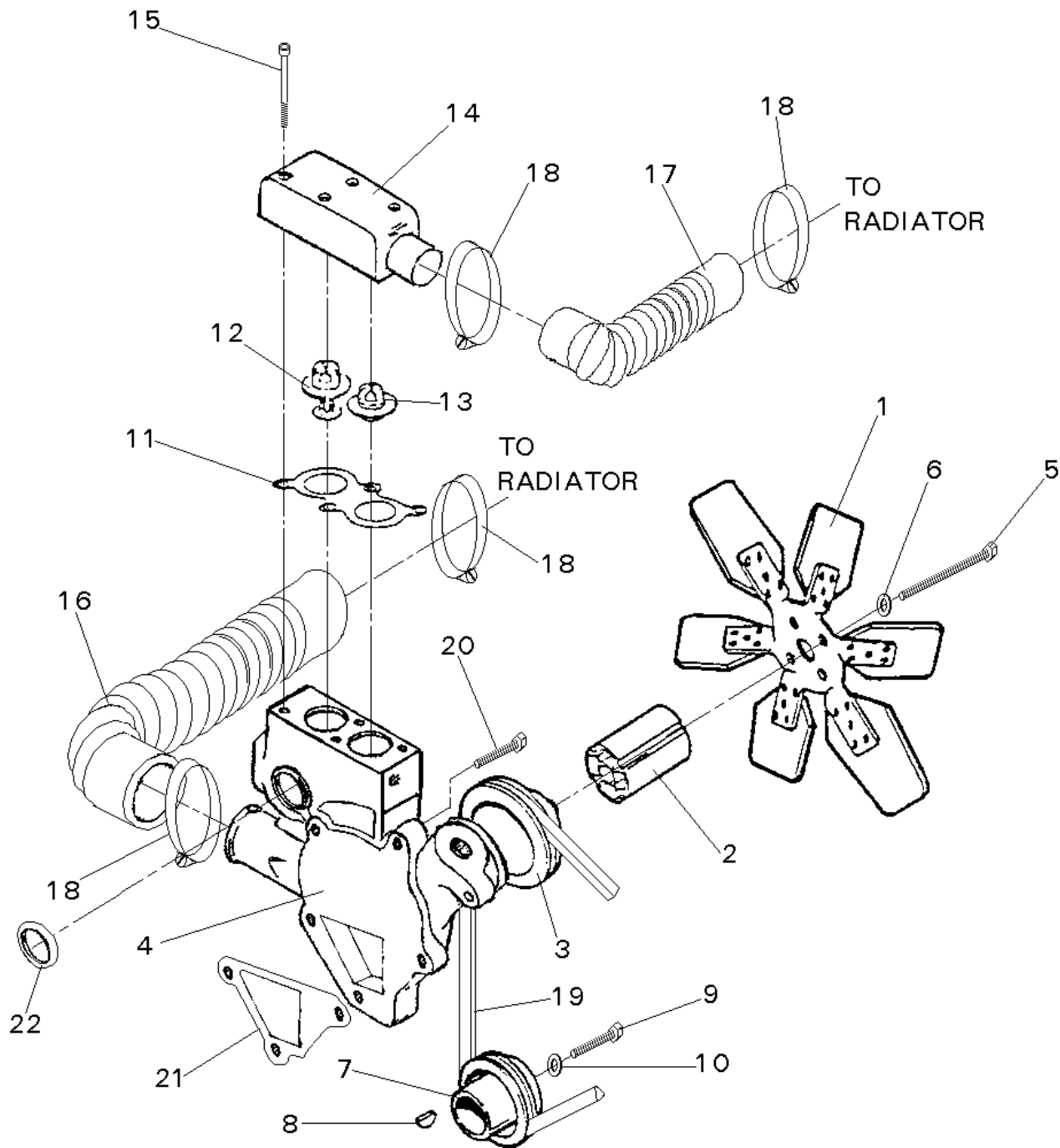
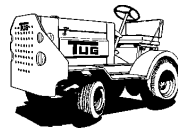


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
30-	----	-----	T6-9011-369	bypass hose, coolant bypass system, low mount fan	1	As Req'd
30-	----	-----	T6-9011-370	hose, pcv valve to manifold, coolant bypass system, low mount fan	1	"
30-	----	-----	T6-9011-371	hose, breather vent to air cleaner, coolant bypass system, low mount fan	1	"
30-	246	ev-127	T6-9011-372	pcv valve, coolant bypass system, low mount fan	1	"
30-	----	-----	T6-9011-373	y-fitting, heater hose, coolant bypass system, low mount fan	1	"
30-	131	1002-04870-240	T6-7010-207	sender, high water temperature, 240°	1	"
30-	----	-----	T6-9011-327	nipple, 3/4-inch pipe, high water temperature sender	1	"
30-	----	-----	T6-9011-328	tee, high water temperature sender	1	"
30-	----	-----	T6-9011-329	reducer, pipe, 1/2-inch to 3/8-inch, high water temperature sender	1	"



**Figure 31: Fan and Water Pump Installation -
Cummins/Onan Diesel Engine**

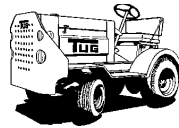


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
31-1	256	c0130315200	-----	fan	1	001 & Up
31-2	256	c0130187600	-----	fan spacer	1	"
31-3	256	c0131034400	-----	water pump pulley	1	"
31-4	256	c0131045900	-----	water pump	1	"
31-5	----	-----	m8x1.25x85	hex head bolt	4	"
31-6	----	-----	m8	flat washer	4	"
31-7	256	c0104146800	-----	crankshaft pulley	1	"
31-8	256	c01515024500	-----	woodruff key	1	"
31-9	----	-----	m16x2.00x60	hex head bolt	1	"
31-10	----	-----	m16	flat washer	1	"
31-11	256	c0309042400	T6-3200-159	gasket, thermostat housing	1	"
31-12	256	c0309042700	-----	thermostat	1	"
31-13	256	c0309050000	-----	thermostat	1	"
31-14	256	c0309051501	-----	thermostat housing, horizontal outlet	1	As Req'd
	256	c0309044900	-----	thermostat housing, vertical outlet	1	"
31-15	----	-----	m8x1.25x60	socket head screw	4	001 & Up
31-16	127	81391	T6-3200-147	radiator hose, lower	1	"
31-17	127	82051	T6-3200-133	radiator hose upper	1	"
31-18	----	-----	#32	hose clamp	4	"
31-19	256	c0511014714	-----	water pump/alternator belt	1	"
31-20	----	-----	m8x1.25x45	hex head bolt	5	"
31-21	256	c0131045800	-----	gasket, water pump	1	"
31-22	256	c0509026400	-----	o-ring	1	"
31-	371	0202400	T6-1001-201	water temperature sensing unit	1	As Req'd
31-	371	104680	T6-7010-153	water temperature gauge	1	"

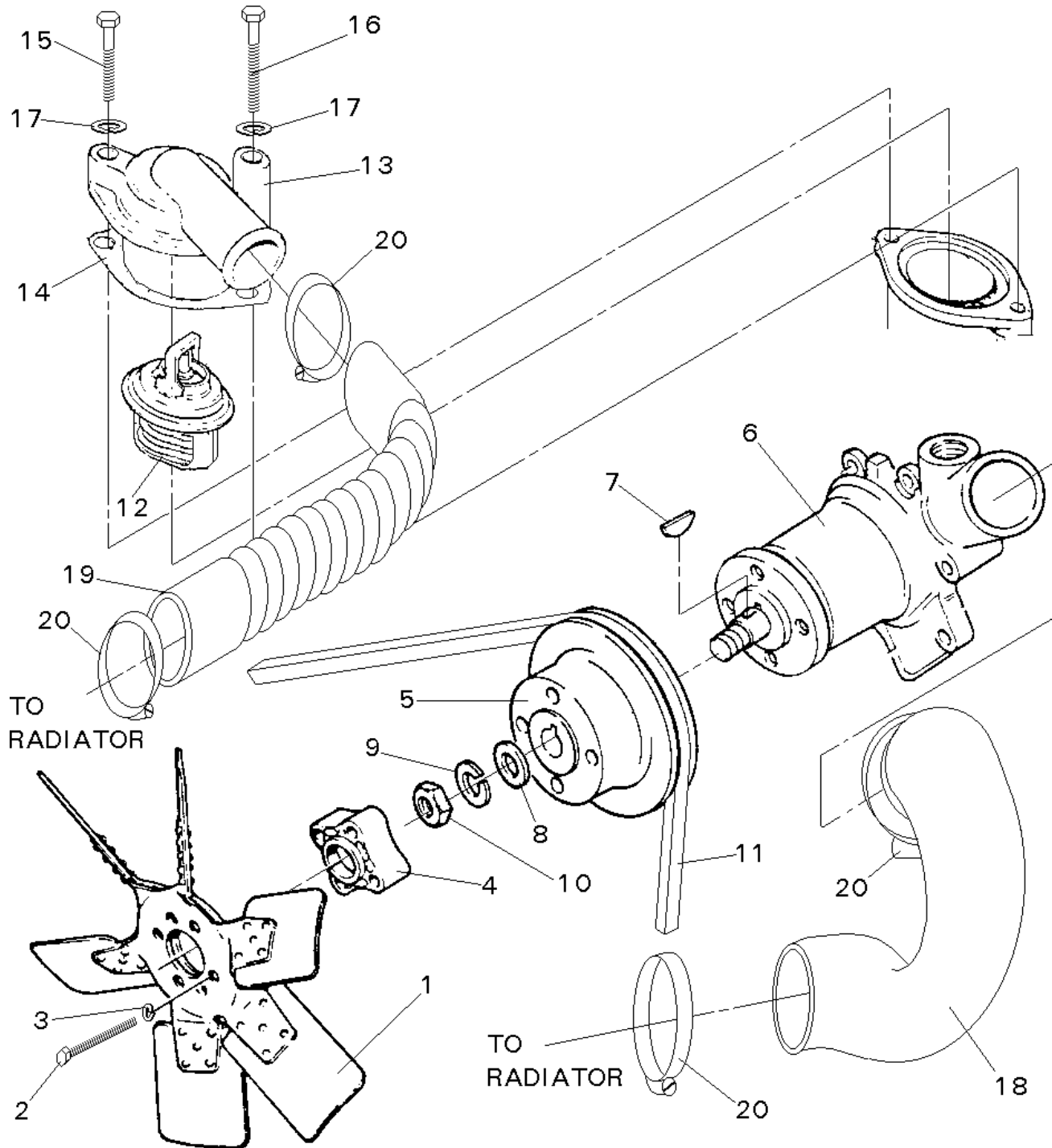
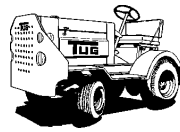


Figure 32: Fan and Water Pump Installation
- Perkins Diesel Engine

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
32-1	110	31257055	-----	FAN	1	001 & Up
32-2	110	oo96235	-----	hex head bolt, fan	4	"
32-3	110	o920053	-----	lock washer, fan	4	"
32-4	110	37413951	-----	fan spacer	1	"
32-5	110	31146013	-----	water pump pulley	1	"
32-6	110	41341A013	-----	water pump	1	"
32-	110	41341A018	-----	water pump gasket	1	"
32-7	110	36866721	-----	woodruff key	1	"
32-8	110	o920009	-----	flat washer	1	"
32-9	110	o920058	-----	lock washer	1	"
32-10	110	o576007	-----	nut	1	"
32-11	110	2614b153	-----	water pump/alternator belt	1	"
32-12	110	2485666	-----	thermostat	1	"
32-13	110	37735072	-----	thermostat housing	1	"
32-14	110	36834147	-----	thermostat housing gasket	1	"
32-15	110	oo96433	-----	hex head bolt, thermostat housing	1	"
32-16	110	oo96438	-----	hex head bolt, thermostat housing	1	"
32-17	110	o920054	-----	lock washer	2	"
32-18	127	70480	T6-4255-107a	Radiator hose, lower	1	"
32-19	127	81141	T6-4255-105	radiator hose, upper	1	"
32-20	----	-----	#28	hose clamp	4	"
32-	----	403035067	T6-7200-180	Water Pump, Herc.	1	"
32-	----	255360	T6-7200-180-1	Water Pump Gasket, Herc.	1	"

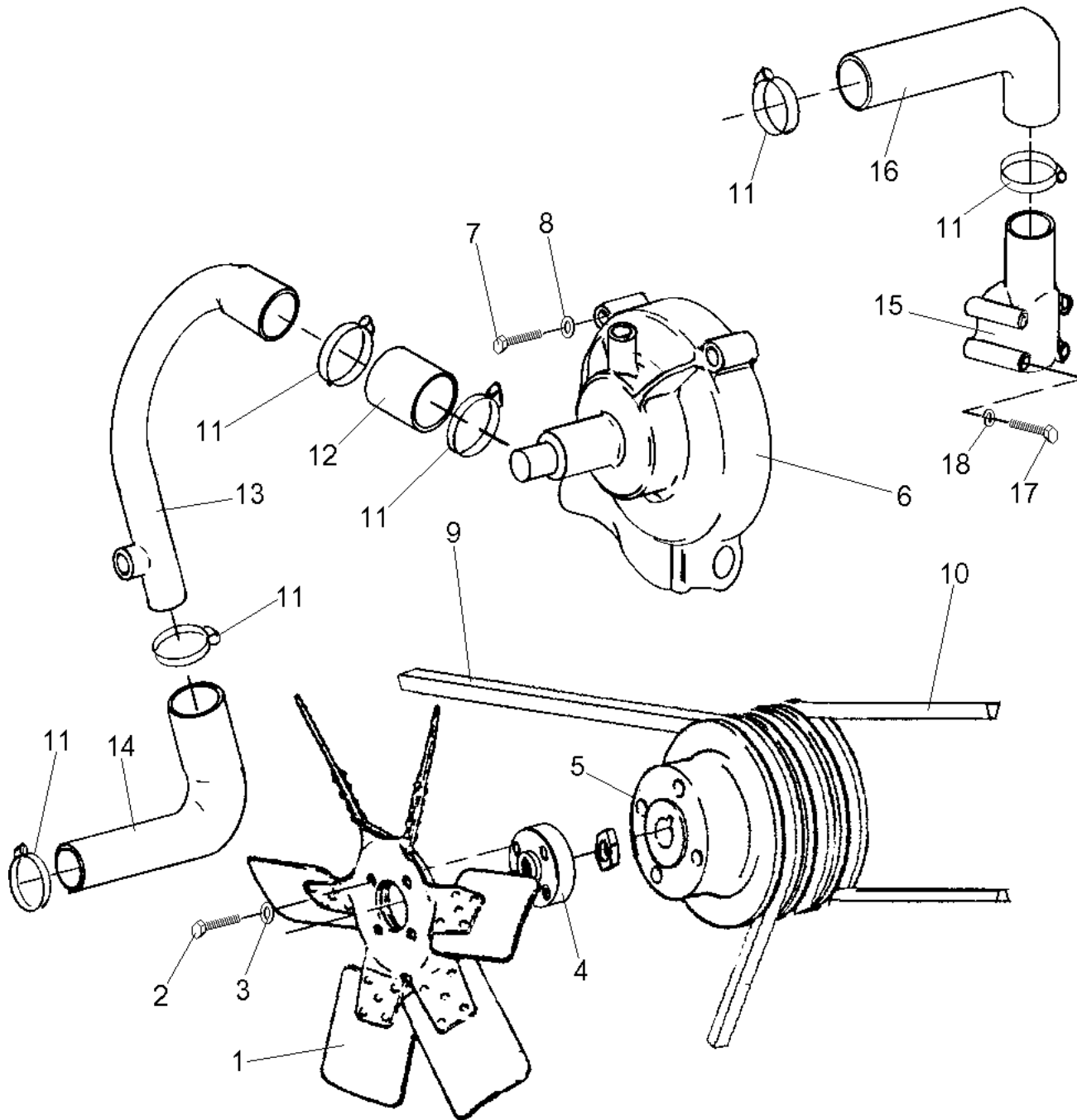
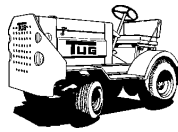


Figure 32A: Fan and Water Pump Installation
- Hercules Diesel Engine

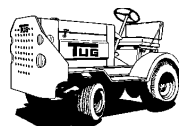
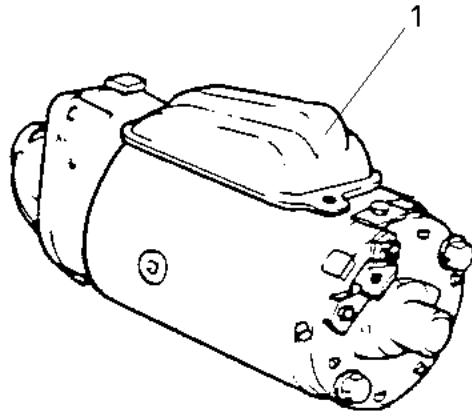
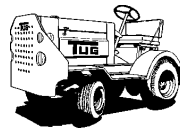
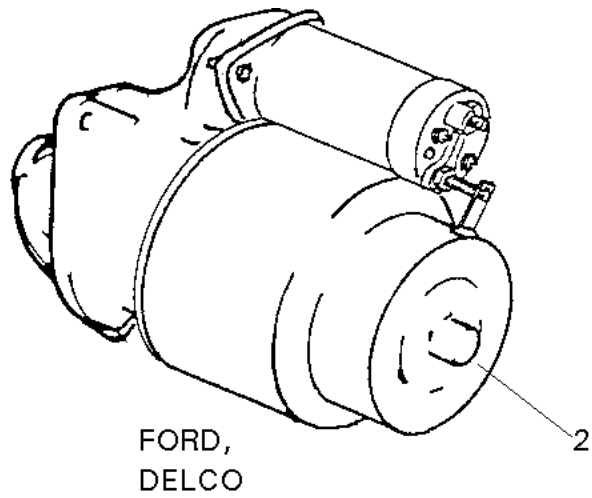


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
32a-1	388	40-2092908	-----	fan	1	As Req'd
32a-2	388	1000-26085	-----	hex head bolt	4	"
32a-3	388	40-0039306	-----	flat washer	4	"
32A-4	388	40-0000218	-----	FAN SPACER	1	"
32A-5	388	40-3082601	-----	WATER PUMP PULLEY	1	"
32A-6	388	40-3035067	-----	WATER PUMP	1	"
32A-	388	255360	-----	GASKET, WATER PUMP	1	"
32A-7	388	40-0038442	-----	HEX HEAD BOLT	3	"
32A-8	388	40-0039302	-----	LOCK WASHER	3	"
32A-9	----	-----	T6-7200-075	FAN BELT	1	"
32A-10	388	40-0004628	-----	BELT, VACUUM PUMP	1	"
32A-11	----	-----	#28	HOSE CLAMP	6	"
32A-12	388	4452-00	-----	HOSE, CONNECTOR	1	"
32A-13	388	40-3070702	-----	PIPE	1	"
32A-14	----	-----	T6-7200-110	RADIATOR HOSE, LOWER	1	"
32A-15	388	40-3070801	-----	THERMOSTAT HOUSING	1	"
32A-	388	205445-00	-----	THERMOSTAT	1	"
32A-	388	266701-00	-----	GASKET, THERMOSTAT HOUSING	1	"
32A-16	----	-----	T6-7200-115	RADIATOR HOSE, UPPER	1	"
32A-17	----	-----	3/8-16NCX3"	HEX HEAD BOLT	4	"
32A-18	----	-----	3/8	LOCK WASHER	4	"
32a-	371	0202400	T6-1001-201	water temperature sensing unit	1	As Req'd
32a-	371	104680	T6-7010-153	water temperature gauge	1	"
32a-	102	020-020	-----	water temperature switch, 210°	1	"
32a-	102	020-004	-----	low coolant switch	1	"

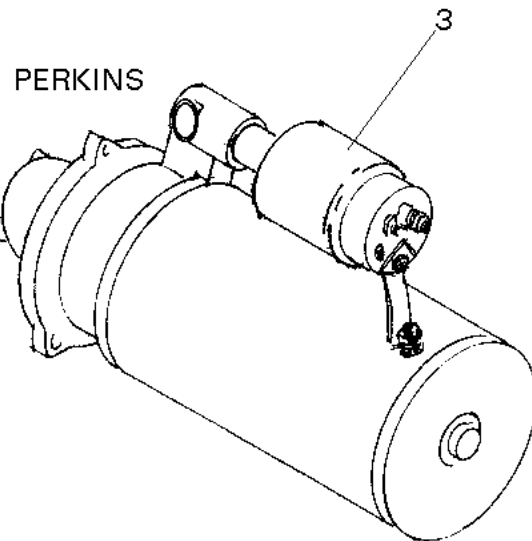
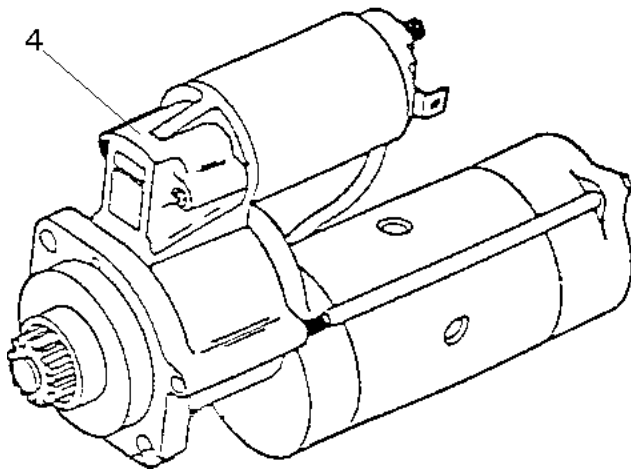


FORD,
MOTORCRAFT



FORD,
DELCO

HERCULES,
CUMMINS/ONAN



PERKINS

Figure 33: Starters

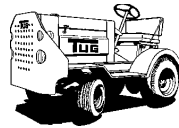


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
33-1	----	E952-11002B	-----	Starter, Motorcraft -Ford 300 CID engine	1	As Req'd
33-	----	-----	T6-1001-103	Starter, 300 CID, PLUNGER POLE TYPE (old)	1	"
33-2	404	10465060	T6-1025-103	Starter, Delco -Ford 300 CID engine	1	"
33-3	404	1113274	T6-7207-103	starter, perkins diesel engine	1	"
33-	----	37513401	-----	spacer	1	"
33-4	256	191-1807	-----	starter, cummins/onan diesel engine	1	"
	388	40-2500441	-----	starter, hercules diesel engine	1	"

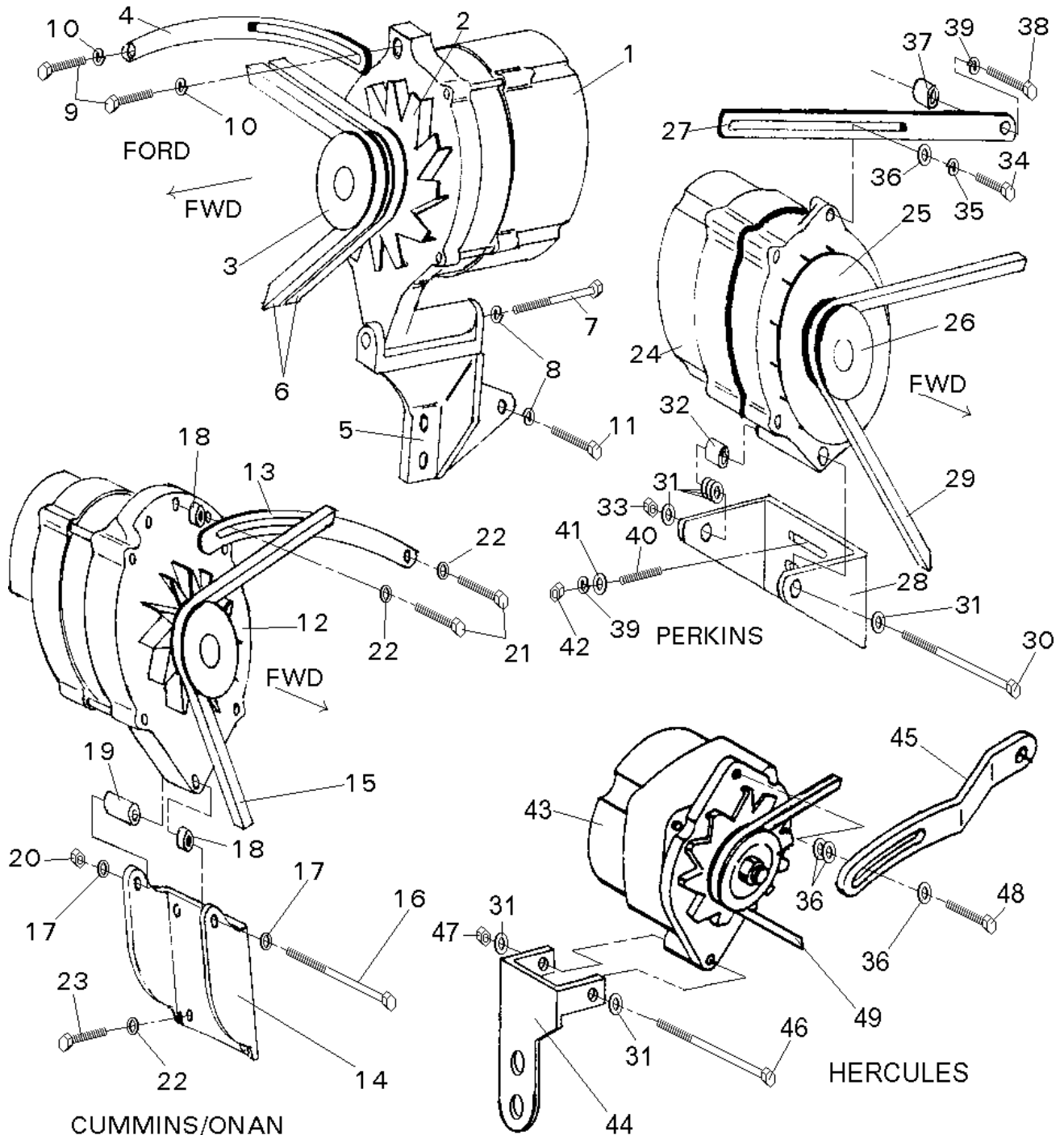
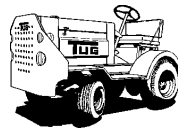


Figure 34: Alternator Installation

Fig & Ind#	Code	Vendor Part Number	Tug Part Number	Description	Qty	Effective
34-1	22	13-3014	T6-7002-113	alternator, motorcraft, 60a, gasoline engine	1	As Req'd
	22	13-3020	T6-7002-117	Alternator, motorcraft, 70a, gasoline engine	1	"
	404	1105360	T6-1211-101-1	alternator, delco, 61a, gasoline engine (note 1)	1	"
34-	----	-----	T6-9011-359	alternator assy, delco 61a, gasoline eng (note 1)		
34-2	246	e5sz-10a310a	-----	alternator fan, motorcraft 60a, gasoline engine	1	"
	404	gp-496aa	T6-7002-121	alternator fan, motorcraft 70a, gasoline engine	1	"
	246	e5sz-10a310a	-----	alternator fan, delco 61a, gasoline engine (note 1)	1	"
34-3	246	d2af-10a352aa	-----	alternator pulley, motorcraft 60a, gasoline engine	1	"
	404	gp-484aa	T6-7002-119	alternator pulley, motorcraft 70a, gasoline engine	1	"
	246	d2az-10344a	-----	alternator pulley, delco 61a, gasoline eng (note 1)	1	"
34-4	256	c5uz-10145a	T6-7002-153	adjusting arm, alternator, 60a/61a, gasoline eng	1	"
	----	-----	T6-7002-133	adjusting arm, alternator, 70a, gasoline engine	1	"
34-5	246	c5ue-10039a	T6-7002-155	alternator bracket, gasoline engine	1	"
34-6	127	15445	T6-9011-151	water pump/alternator belt, Gasoline engine	Ref.	"
34-7	----	-----	7/16-14ncx4-1/4"	hex head bolt	1	"
34-8	----	-----	7/16	lock washer	4	"
34-9	----	-----	5/16-18ncx3/4"	hex head bolt	2	"
34-10	----	-----	5/16	lock washer	2	"
34-11	----	-----	7/16-14ncx1"	hex head bolt	3	"
34-			T6-1212-107	resistor, ammeter	1	"

1. Delco 61 amp alternator assembly T6-9011-359 for gasoline engines includes alternator T6-1211-101-1, alternator pulley D2AZ-10344A and alternator fan E5SZ-10A310A.

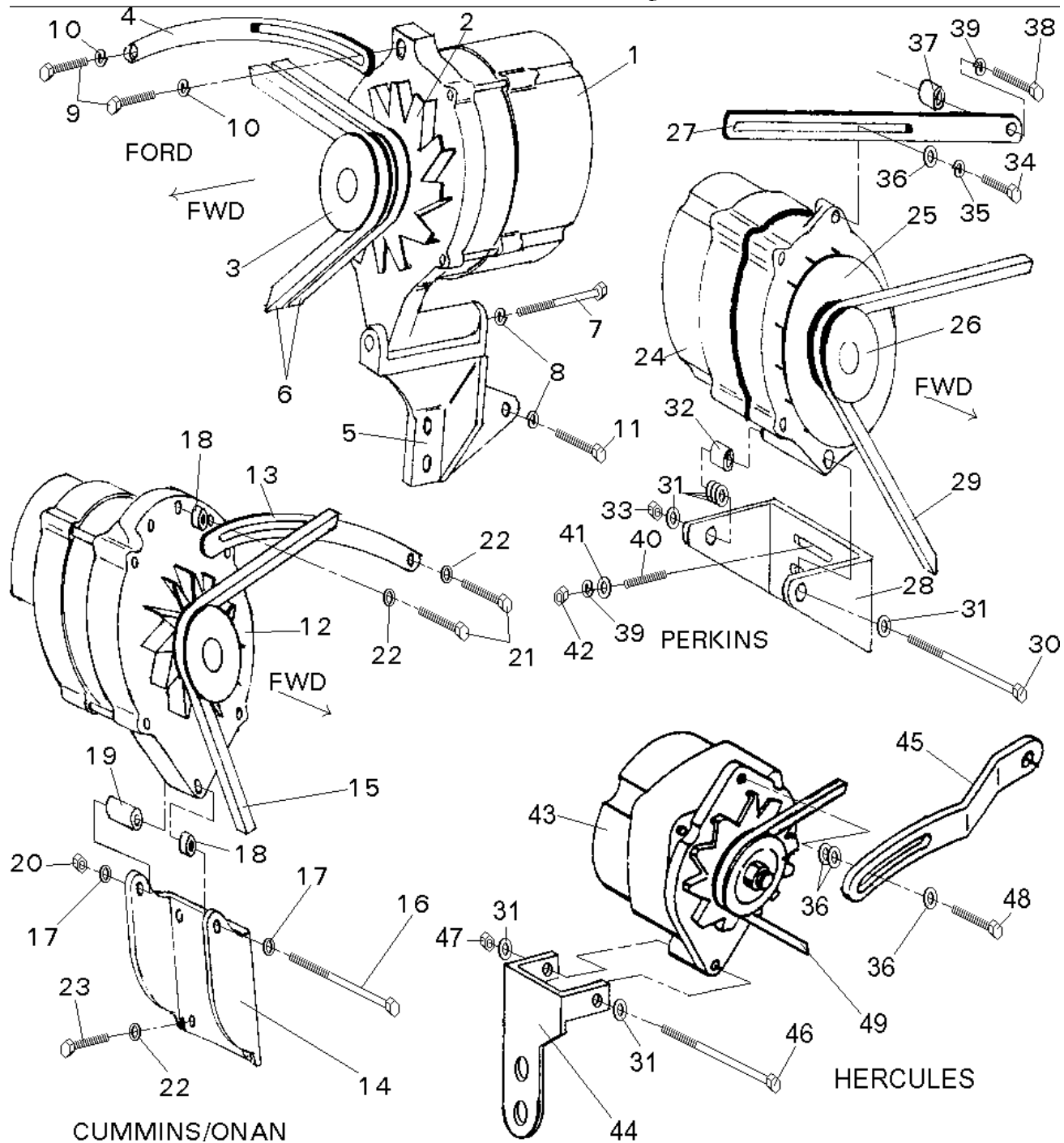
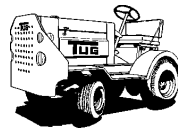


Figure 34: Alternator Installation

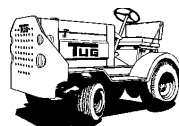


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
34-12	256	c0191187200	-----	alternator, 37a, cummins/onan engine*	1	As Req'd
	----	-----	T6-1211-101	alternator assy, delco 61a, diesel engine (note 2)	1	"
34-	404	1105360	T6-1211-101-1	alternator, 61a, without fan and pulley (note 2)	1	"
34-	404	1963261	T6-1211-101-3	alternator fan, 61a (note 2)	1	"
34-	404	1959703	T6-1211-101-2	alternator pulley, 61a (note 2)	1	"
34-13	256	c0191136500	-----	adjusting arm, alternator, cummins/onan engine	1	"
34-14	256	c0191133100	-----	alternator bracket, cummins/onan engine	1	"
34-15	256	c0511014715	-----	water pump/alternator belt, cummins/onan engine	1	"
34-16	----	-----	m10x1.50x100	hex head bolt	1	"
34-17	----	-----	m10	flat washer	2	"
34-18	256	c0191132200	-----	spacer, short	2	"
34-19	256	c0370404900	-----	spacer, long	1	"
34-20	----	-----	m10	locknut	1	"
34-21	----	-----	m8x1.25x20	hex head bolt	2	"
34-22	----	-----	m8	flat washer	6	"
34-23	----	-----	m8x1.25x25	hex head bolt	4	"
34-24	404	1105360	T6-1211-101-1	alternator, 61a, without fan and pulley (note 2)	1	"
34-25	404	1963261	T6-1211-101-2	alternator fan, 61a (note 2)	1	"
34-26	404	1959703	T6-1211-101-3	alternator pulley, 61a (note 2)	1	"
34-	----	-----	T6-1211-101	alternator assy, delco 61a, diesel engine (note 2)	1	"

*(includes fan and pulley)

2. Delco 61 amp alternator assembly T6-1211-101 for diesel engines includes alternator T6-1211-101-1, alternator fan T6-1211-101-2 and alternator pulley T6-1211-101-3.

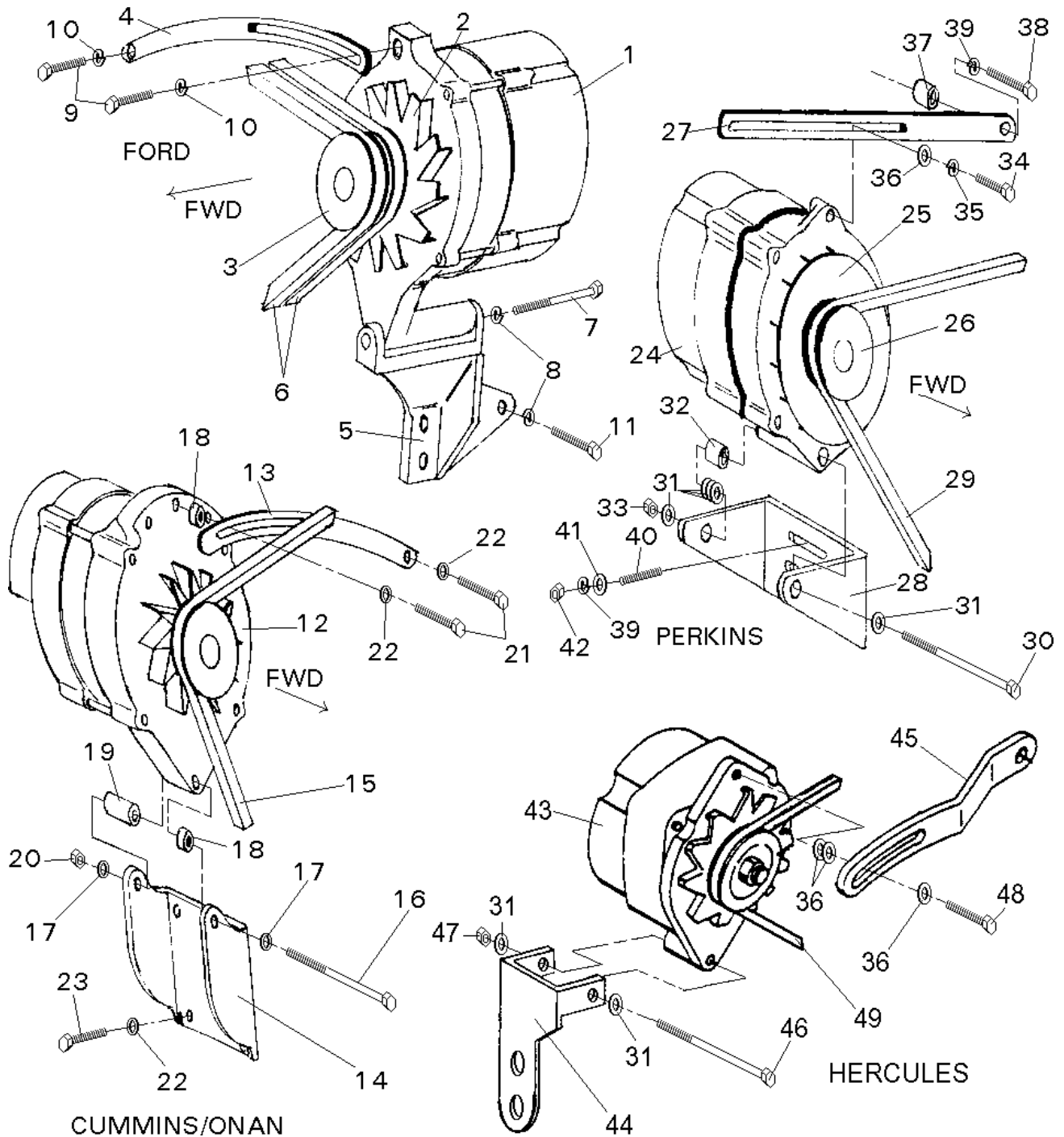
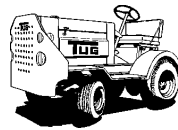


Figure 34: Alternator Installation

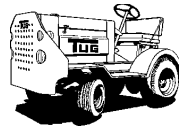


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
34-27	110	36155154	-----	adjusting arm, alternator, perkins engine	1	As Req'd
34-28	110	38164125	-----	Alternator bracket, perkins engine	1	"
34-29	127	17510	T6-1200-147	water pump/alternator belt	1	"
34-30	110	2184545	-----	hex head bolt	1	"
34-31	----	-----	3/8	flat washer	Ref.	"
34-32	----	-----	T6-9011-363	spacer	1	"
34-33	110	2211224	-----	locknut	1	"
34-34	110	2314h003	-----	hex head bolt	1	"
34-35	----	-----	5/16	lock washer	1	"
34-36	----	-----	5/16	flat washer	1	"
34-37	110	33245408	-----	spacer	1	"
34-38	110	o096434	-----	hex head bolt	1	"
34-39	110	o920054	-----	lock washer	3	"
34-40	110	2217161	-----	stud	2	"
34-41	110	o920004	-----	flat washer	2	"
34-42	110	o576051	-----	nut	2	"
34-43	388	40-2505580	-----	Alternator assembly, hercules engine	1	"
34-44	----	-----	T6-7200-055	mounting bracket, alternator, hercules engine	1	"
34-45	----	-----	T6-7200-050	adjusting arm, alternator, hercules engine	1	"
34-46	----	-----	3/8-16ncx3-1/2"	hex head bolt	1	"
34-47	----	-----	3/8-16nc	locknut	1	"
34-48	----	-----	5/16-18ncx1-1/4"	hex head bolt	1	"
34-49	----	-----	T6-7200-075	water pump/alternator belt, hercules engine	1	"

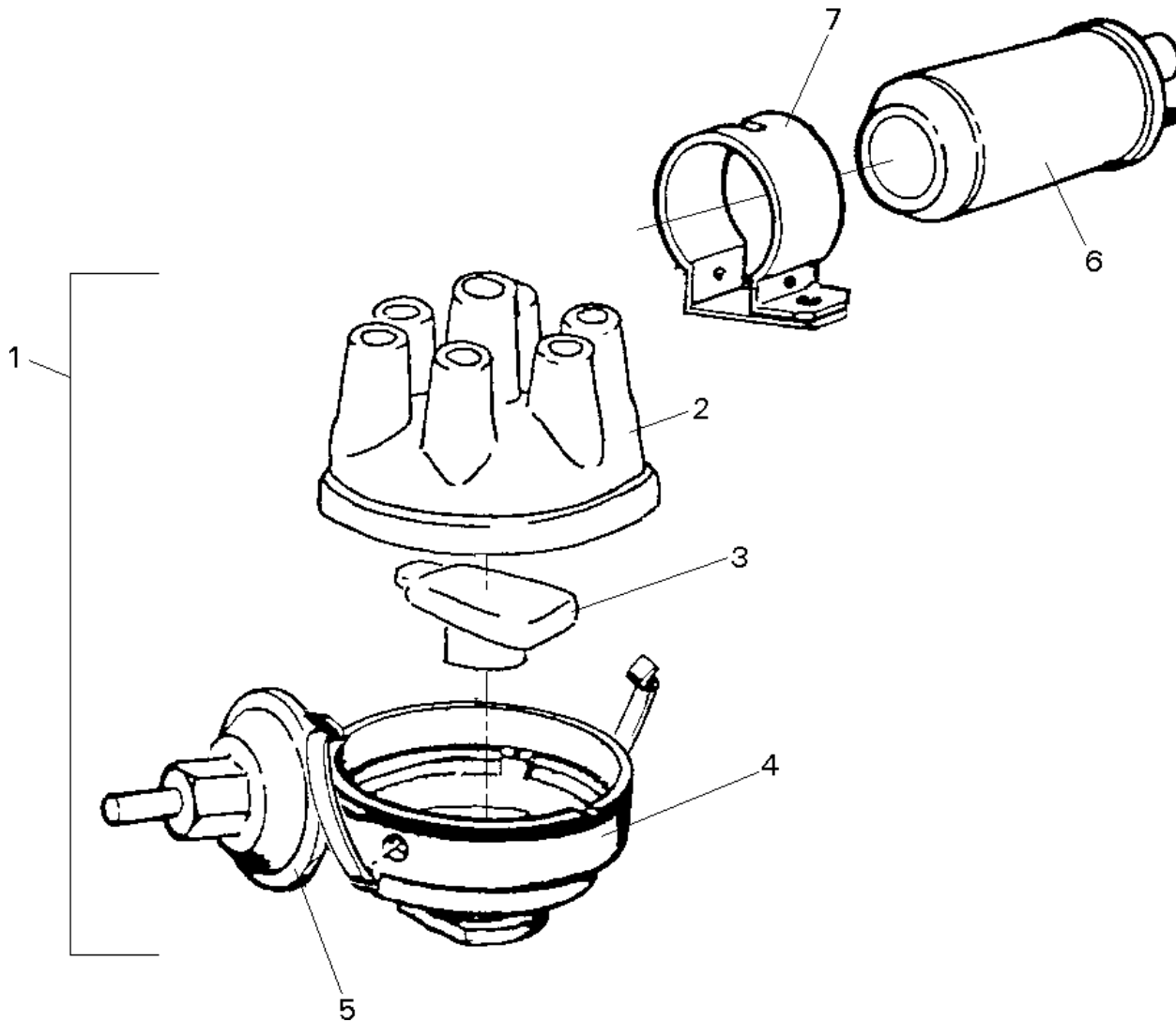
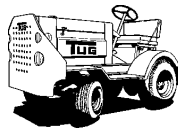


Figure 35: Ignition System Installation

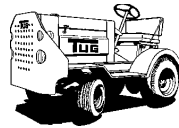


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
35-1	79	81402	T6-7022-101	distributor assembly	1	330 & Up
	22	482669	T6-7021-101	distributor assembly	1	206-330
35-2	127	fr121m	T6-7022-103	distributor cap	1	330 & Up
	-----	-----	T6-7021-115	distributor cap	1	206-330
	246	7ha12106	T6-7018-115	distributor cap	1	001-084
35-3	127	fr106m	T6-7022-105	rotor button	1	330 & Up
	22	fa-143	T6-7021-103	rotor button	1	206-330
	246	c5tz-12200b	T6-7018-133	rotor button	1	085-163
	246	c5tz-12208	T6-7018-103	rotor button	1	001-084
35-4	-----	-----	T6-7022-107	distributor housing	1	330 & Up
	246	d3bz-12127b	T6-7018-141	distributor housing	1	164-205
	246	d3uz-12127b	T6-7018-125	distributor housing	1	001-163
35-5	256	d5tz-12370j	T6-7022-109	diaphragm assembly, distributor	1	330 & Up
35-6	256	d5az-12029a	T6-7014-101	ignition coil	1	"
35-7	256	b85-12043	-----	ignition coil strap	1	"
35-	22	mp-702	T6-7021-105	reluctor	1	206-330
35-	127	el331	T6-7021-107	plate assembly, magnetic pickup	1	"
35-	256	d9uz-12a199a	-----	ignition module	1	330 & Up
35-	256	d7jl-12a200a	T6-1300-127s	electronic ignition harness	1	"
35-	256	bsf-42	-----	spark plug	6	"
35-	256	wr4050	-----	wire kit (includes spark plug wires and coil wire)	1	"

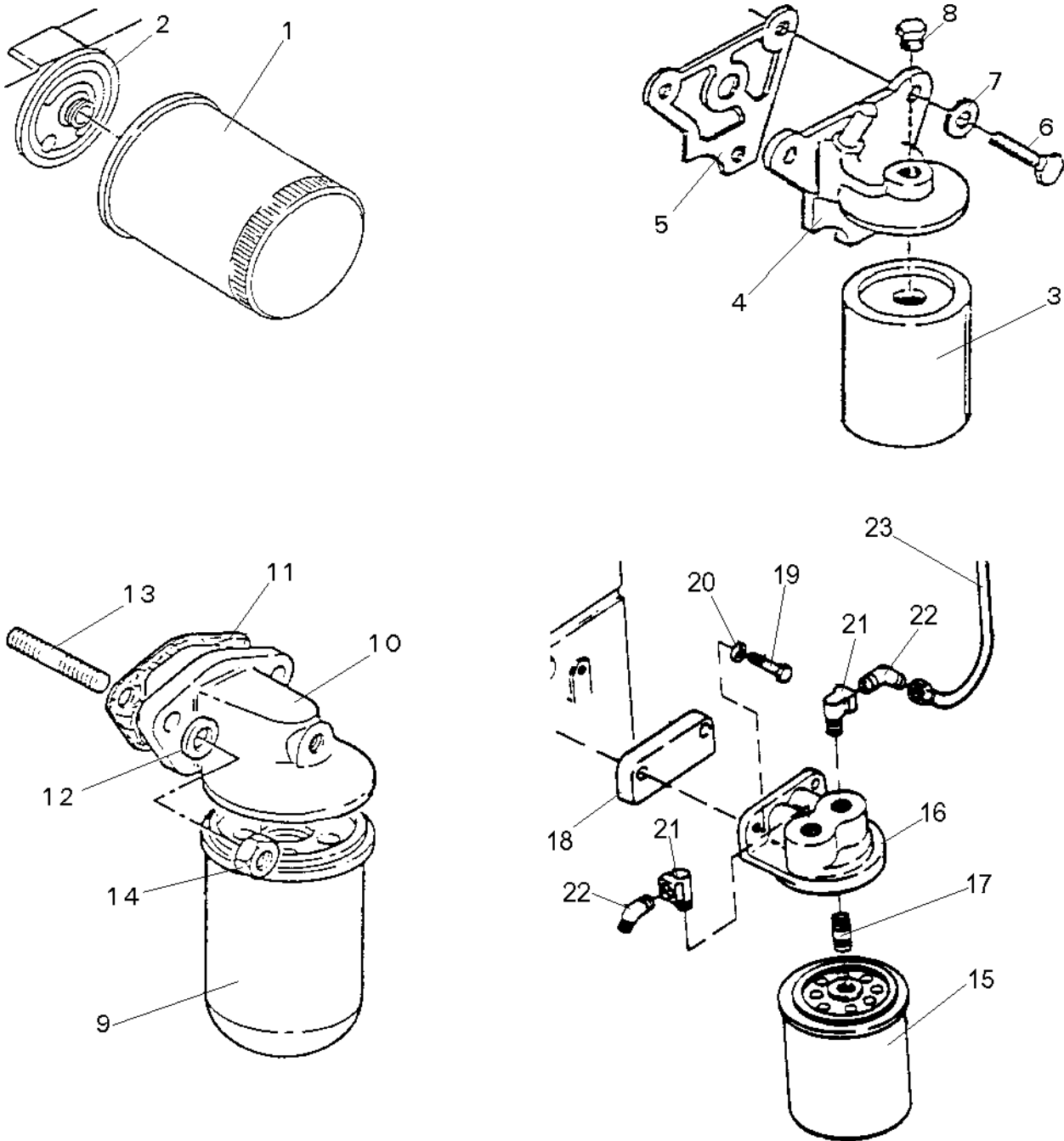
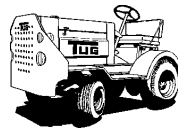


Figure 36: Oil Filter Installation

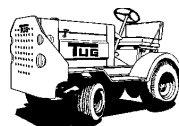


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
36-1	246	d9az-6731a	T6-1001-207	oil filter, 300 cid gasoline engine	1	As Req'd
36-2	246	eam-6890a	T6-1001-159	threaded insert, 300 cid gasoline engine	1	"
36-3	256	c0122055000	122-0550	oil filter, cummins/onan engine	1	"
36-4	256	c0122059200	-----	oil filter head, cummins/onan engine	1	"
36-5	256	c0122059700	-----	gasket, filter head, cummins/onan engine	1	"
36-6	256	c0725105100	-----	socket head cap screw, cummins/onan engine	3	"
36-7	256	c0526210800	-----	flat washer	3	"
36-8	----	-----	1/8-27npt	pipe plug, cummins/onan engine	1	"
36-9	127	ph2821a	T6-1201-207	oil filter, perkins engine	1	"
36-10	110	37764181	-----	oil filter body, perkins engine	1	"
36-11	110	36862517	-----	gasket, perkins engine	1	"
36-12	110	33115118	-----	flat washer, perkins engine	2	"
36-13	110	o826608	-----	Stud, perkins engine	2	"
36-14	110	o576054	-----	locknut, perkins engine	2	"
36-15	388	40-0000401	-----	oil filter, hercules engine	1	"
36-16	388	40-0026501	-----	oil filter base, hercules engine	1	"
36-17	388	208642	-----	adaptor, hercules engine	1	"
36-18	388	40-0003836	-----	bracket, oil filter, hercules engine	1	"
36-19	388	1000-26153	-----	hex head bolt, hercules	2	"
36-20	388	14416	-----	lock washer, hercules	2	"
36-21	388	206210	-----	elbow, 90°	2	"
36-22	388	40-0005582	-----	fitting, 45°	2	"
36-23	388	40-0018208	-----	filter outlet line	1	"

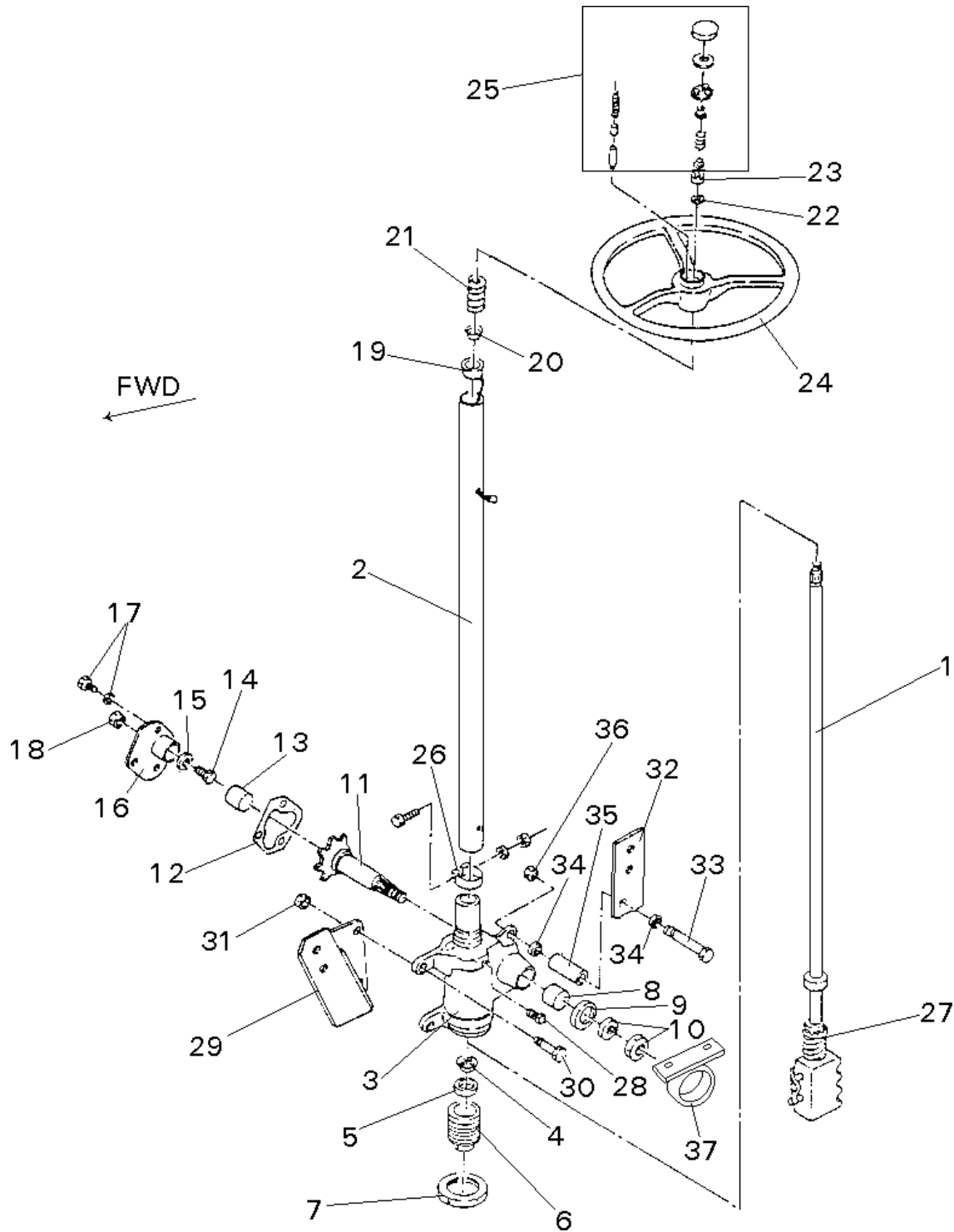
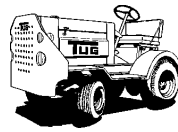


Figure 37 Steer Sector Assembly

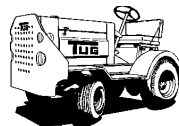


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
37-	436	9512396	T6-5001-101	steering sector, complete	1	001 & Up
37-1	436	7812955	T6-5001-149	steering shaft assembly (obsolete)	1	"
37-2	436	7801598	T6-5001-113	tube, steering column	1	"
37-3	436	5692532	T6-5001-117	housing, steering gear	1	"
37-4	436	7840888	T6-5001-157	adjuster assembly	1	"
37-5	436	5666693	T6-5001-151	bearing, lower thrust	1	"
37-6	436	5668489	T6-5001-143	retainer, bearing	1	"
	436	5666682	T6-5001-145	adjuster	1	"
	436	5666683	T6-5001-155	race	1	"
37-7	436	5676217	T6-5001-147	bearing adjuster nut	1	"
37-8	436	266316	T6-5001-135	bushing, shaft side	1	"
37-9	436	7801626	T6-5001-137	seal, pitman shaft	1	"
37-10	436	5667628/ 5697702	T6-5001-139	nut and lock washer	1	"
37-11	436	7812834	T6-5001-119	pitman shaft and gear	1	"
37-12	436	5666734	T6-5001-121	gasket	1	"
37-13	436	7800853	T6-5001-123	bushing, gear side (obsolete)	1	"
37-14	436	7802482	T6-5001-125	lash adjuster	1	"
37-15	436	266903	T6-5001-127	shim, lash	1	"
37-16	436	7802483	T6-5001-129	cover, housing	1	"
37-17	436	7807009	T6-5001-133	bolt and lock washer	3	"
37-18	436	114495	T6-5001-131	nut, lash adjuster	1	"
37-19	436	7801596	md-cs3-109	upper bearing	1	"
37-20	436	264831	md-cs3-113	spring seat	1	"
37-21	436	264832	md-cs3-111	spring	1	"
37-22	----	-----	1/2	washer	1	"
37-23	----	-----	T6-5001-103	steering wheel mounting nut	1	"
37-24	182	7921a1	T6-5003-101	steering wheel	1	"
37-25	436	5692044	T6-7012-107	horn button kit	1	As Req'd
37-26	436	262545	T6-5001-115	steering column strap assembly	1	001 & Up
37-27	436	5666693	T6-5001-141	upper thrust bearing	1	"

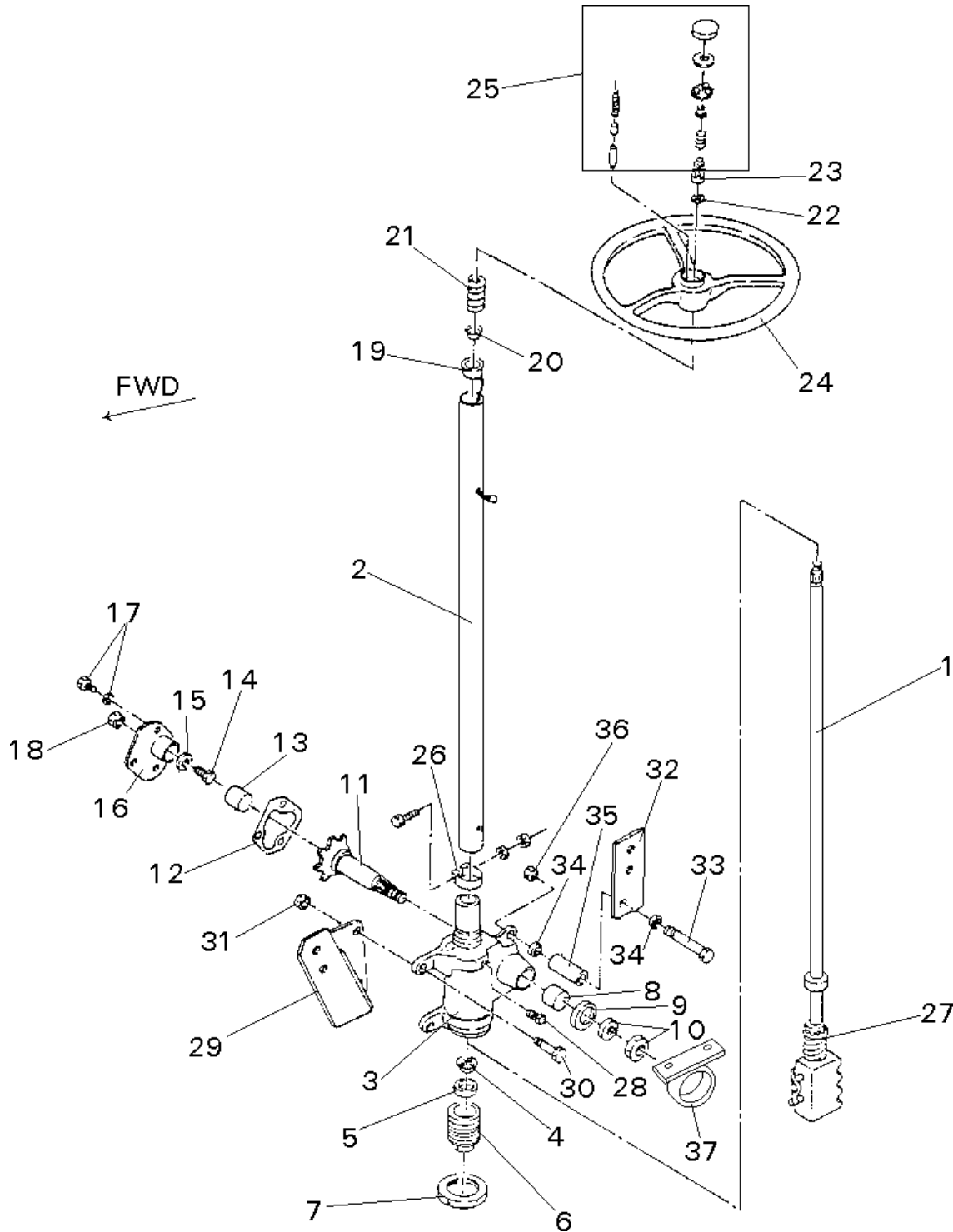
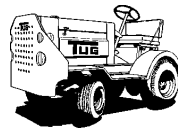


Figure 37 Steer Sector Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
37-28	436	103868	T6-5001-153	grease plug	1	001 & Up
37-29	-----	-----	T6-5006-103	steering sector lower mount	1	001-020
	-----	-----	T6-5006-111	steering sector lower mount	1	021-130
	-----	-----	T6-5006-119	steering sector lower mount, gasoline engine	1	131 & Up
	-----	-----	T6-5206-101	steering sector lower mount, diesel engine	1	"
37-30	-----	-----	1/2-13ncx1-1/2"	hex head bolt	2	"
37-31	-----	-----	1/2-13nc	locknut	2	"
37-32	-----	-----	T6-5106-105	lower rear steer support strap	1	362 & Up
37-33	-----	-----	3/8-16ncx1-1/2"	hex head bolt	1	001 & Up
37-34	-----	-----	3/8	flat washer	1	"
37-35	-----	-----	T6-5006-109	spacer, gasoline engine	1	362 & Up
	-----	-----	T6-5206-105	spacer, diesel engine	1	"
	-----	-----	T6-5006-107	spacer	1	001-361
37-36	-----	-----	3/8-16nc	locknut	1	001 & Up
37-37	-----	-----	T6-5106-109	steering sector reinforcement, gasoline engine	1	2735 & Up
	-----	-----	T6-5204-107	steering sector reinforcement, diesel engine	1	"
37-	-----	-----	T6-5005-105	upper steering column clamp	1	"
37-	-----	-----	T6-5005-107	spacer, upper steering column clamp	1	"
37-	-----	-----	T6-5020-101	steering column lower support reinforcement angle	1	As Req'd
37-	-----	-----	T6-5020-103	clamp, steering column lower support reinforcement angle	1	"

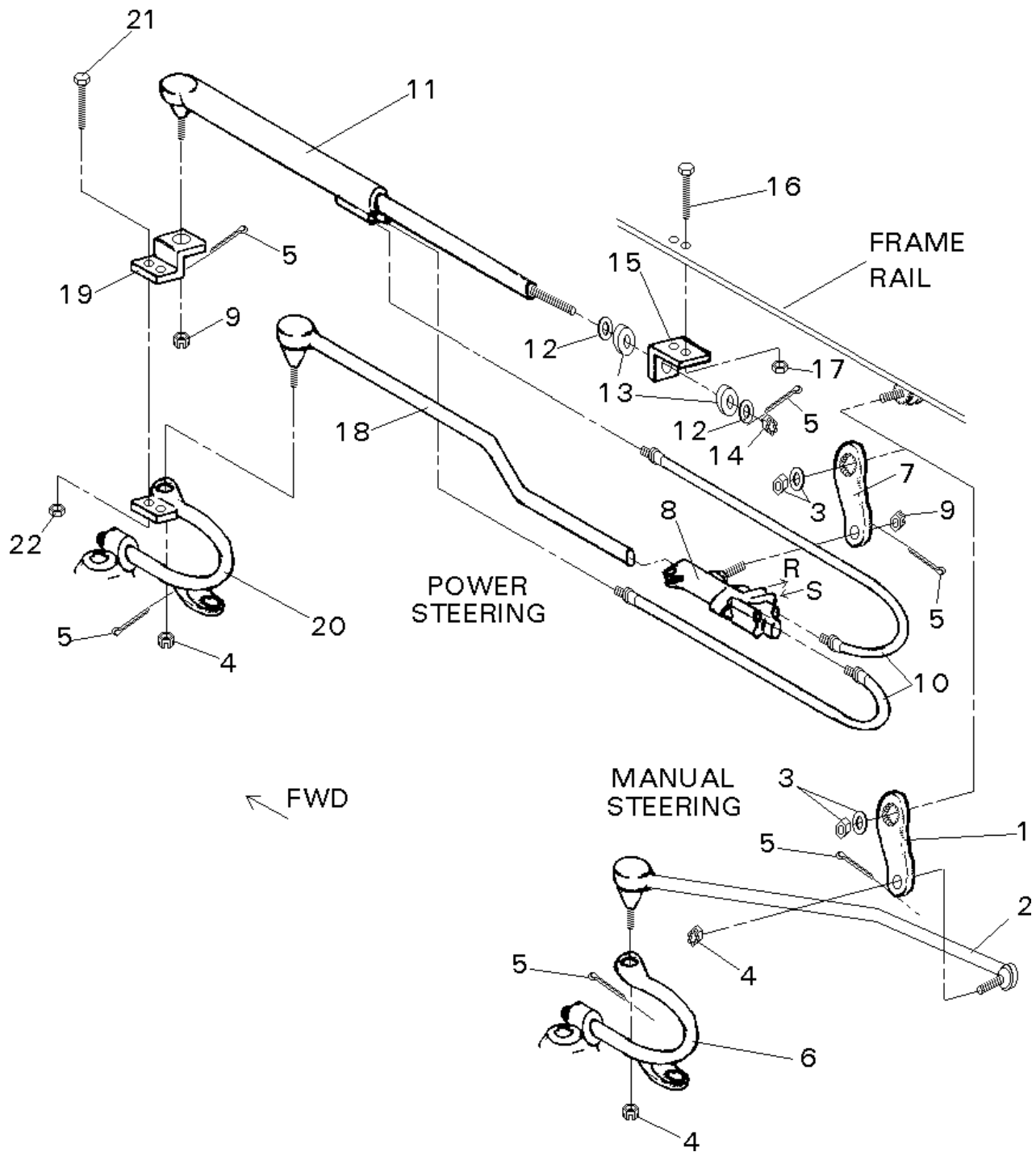
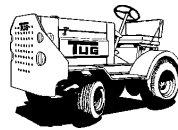


Figure 38: Steering Linkage Assembly

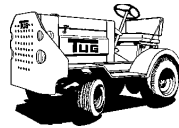


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
38-1	----	-----	T6-5002-101	pitman arm, manual steering	1	330 & Up
	----	-----	T6-5002-105	pitman arm	1	001-329
38-2	----	-----	T6-5004-107	drag link, manual steering, gasoline engine	1	330 & Up
	----	-----	T6-5204-101	drag link, manual steering, diesel engine	1	"
	----	-----	T6-5004-101	drag link, manual steering	1	001-329
38-3	436	5667628/5697702	T6-5001-139	nut and lock washer	1	001 & Up
38-4	----	-----	5/8-18nf	castellated nut	Ref.	"
38-5	----	-----	1/8x1"	cotter pin	Ref.	"
38-6	171	3122e-733	T6-3001-137	spindle arm, lh, manual steering (discontinued)	1	As Req'd
38-7	----	-----	T6-5006-101	pitman arm, power steering	1	"
38-8	433	7825636	T6-5012-101	valve, power steering	1	"
38-9	----	-----	1/2-20nf	castellated nut	Ref.	"
38-10	----	F4212B28-4-4x49	T6-6012-111	hose, cylinder-to-valve, standard power steering	2	"
	----	-----	T6-6012-201	hose, cylinder-to-valve, heavy-duty power steering	2	"
38-	250	149f-6-4	md-h09-115	elbow, 90°, heavy-duty power steering cylinder	2	"
38-11	433	5691112	T6-5010-101	cylinder actuator, standard power steering	1	"
38-	----	es262r	md-s01-140	tie rod end, heavy-duty power steering actuator	1	"
38-12	364	3938729	T6-5013-103	flat washer, standard power steering cylinder	2	"
38-13	364	3709452	T6-5013-101	grommet, standard power steering cylinder actuator	2	"
	----	-----	T6-5010-207	washer, rubber, heavy-duty power steering cylinder actuator	2	"
38-	----	-----	T6-5010-211	jamb nut, front, heavy-duty power steering cylinder actuator	1	"

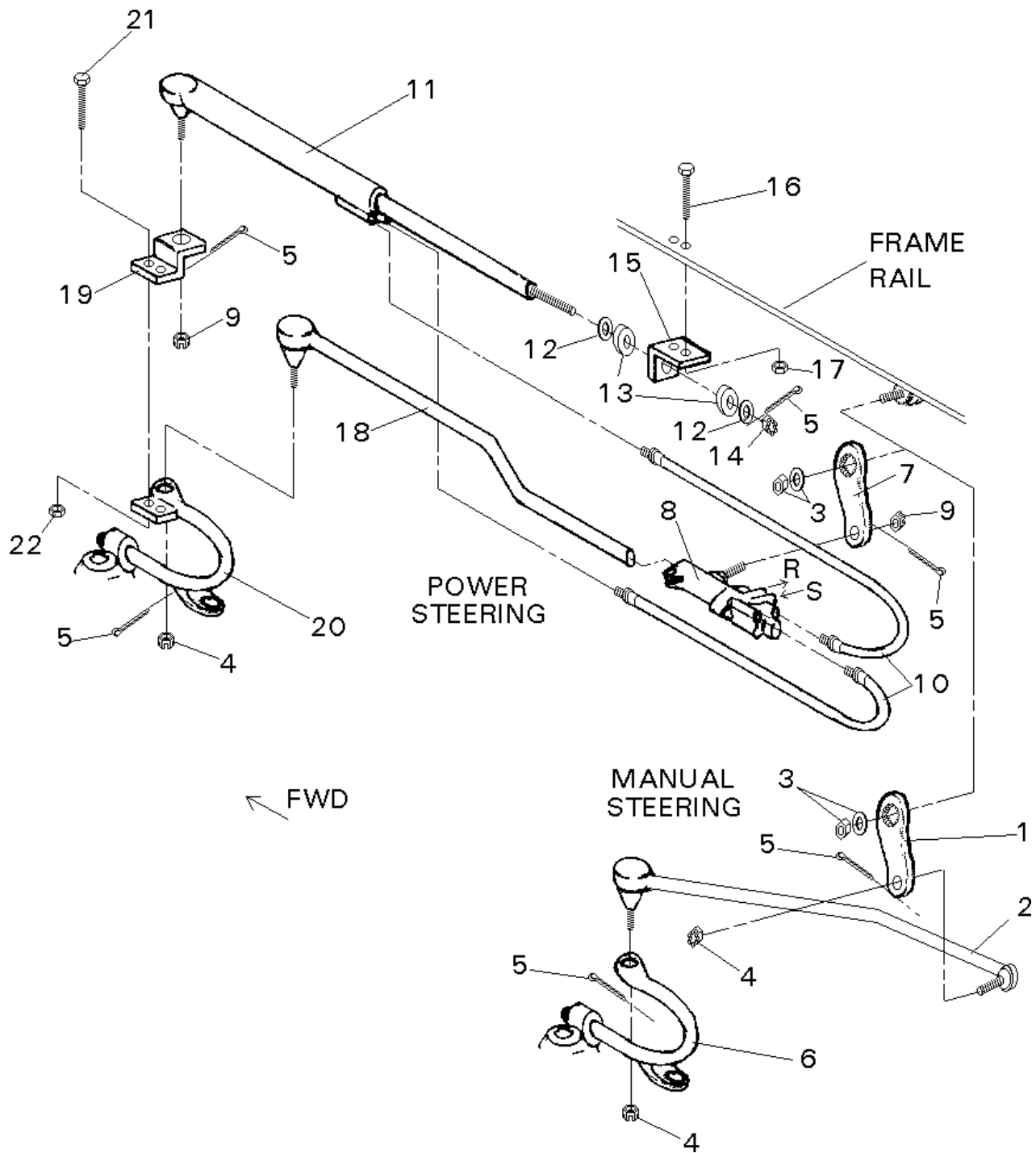
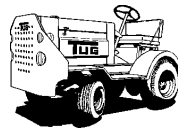


Figure 38: Steer Linkage Assembly

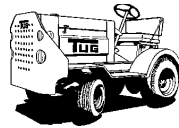


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
38-14	----	-----	3/8-24nf	castellated nut, standard power steering	1	As Req'd
	----	-----	T6-5010-209	castellated nut, rear, heavy-duty power steering	1	"
38-15	----	-----	T6-5009-103	cylinder rear support angle, standard power steering	1	"
	----	-----	T6-5010-205	cylinder rear support angle, heavy-duty power steering	1	"
38-16	----	-----	3/8-16ncx1-1/2"	hex head bolt	2	"
38-17	----	-----	3/8-16nc	locknut	2	"
38-18	----	-----	T6-5014-101	drag link, power steering, gasoline engine	1	"
	----	-----	T6-5204-105	drag link, power steering, diesel engine	1	"
38-19	----	-----	T6-5008-109	power steering mounting bracket, without front brakes	1	"
	----	-----	T6-5011-109	power steering mounting bracket, with front brakes	1	"
38-20	----	-----	T6-3001-137ps	spindle arm, lh, power steering	1	"
38-21	----	-----	5/16-18ncx2"	hex head bolt	2	"
38-22	----	-----	5/16-18nc	locknut	2	"
38-	----	-----	T6-5010-101kg	power steering conversion kit, gasoline engine	1	"
38-	----	-----	T6-5010-101kd	power steering conversion kit, diesel engine	1	"
38-	----	-----	T6-5004-103	bushing, spindle arm-drag link, tapered	1	001-030
	----	-----	T6-5004-105	bushing, spindle arm-drag link, straight	1	031-329

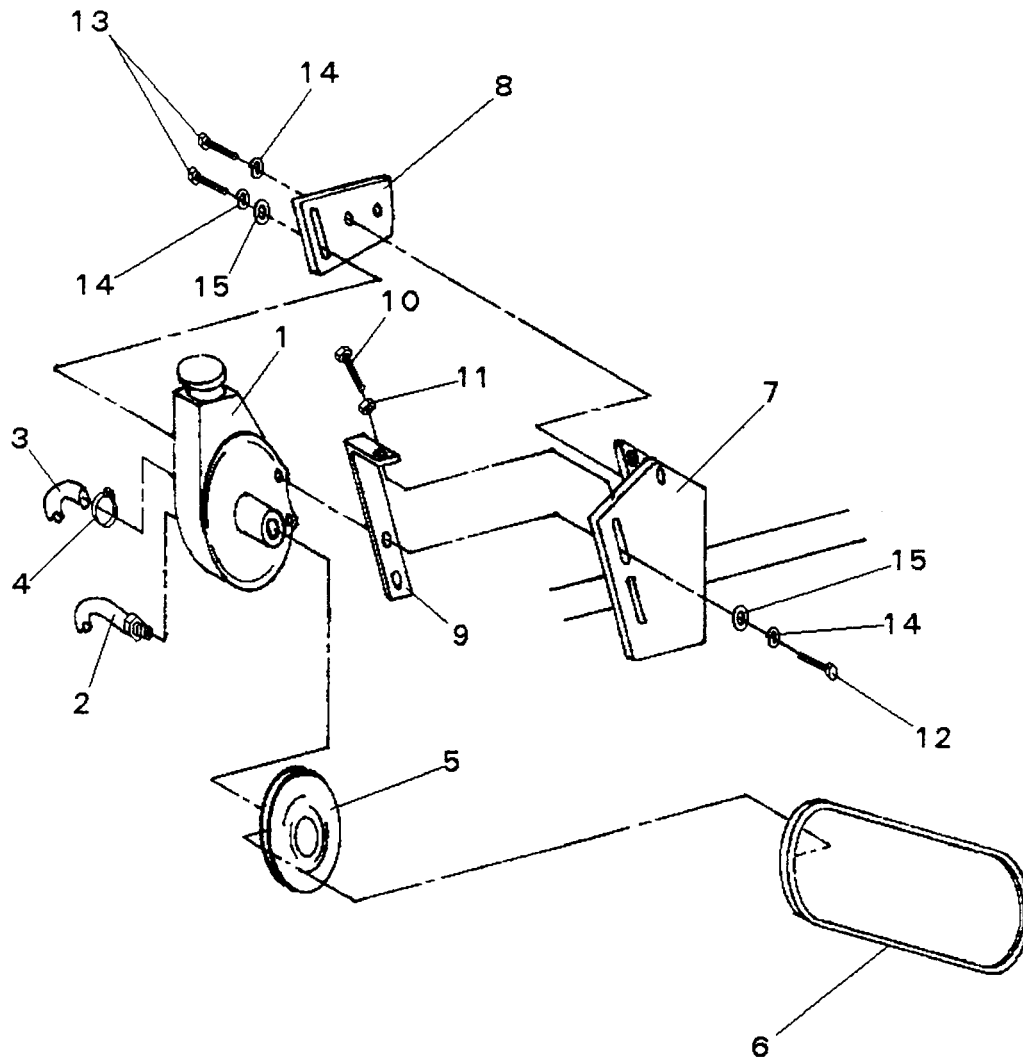
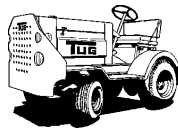
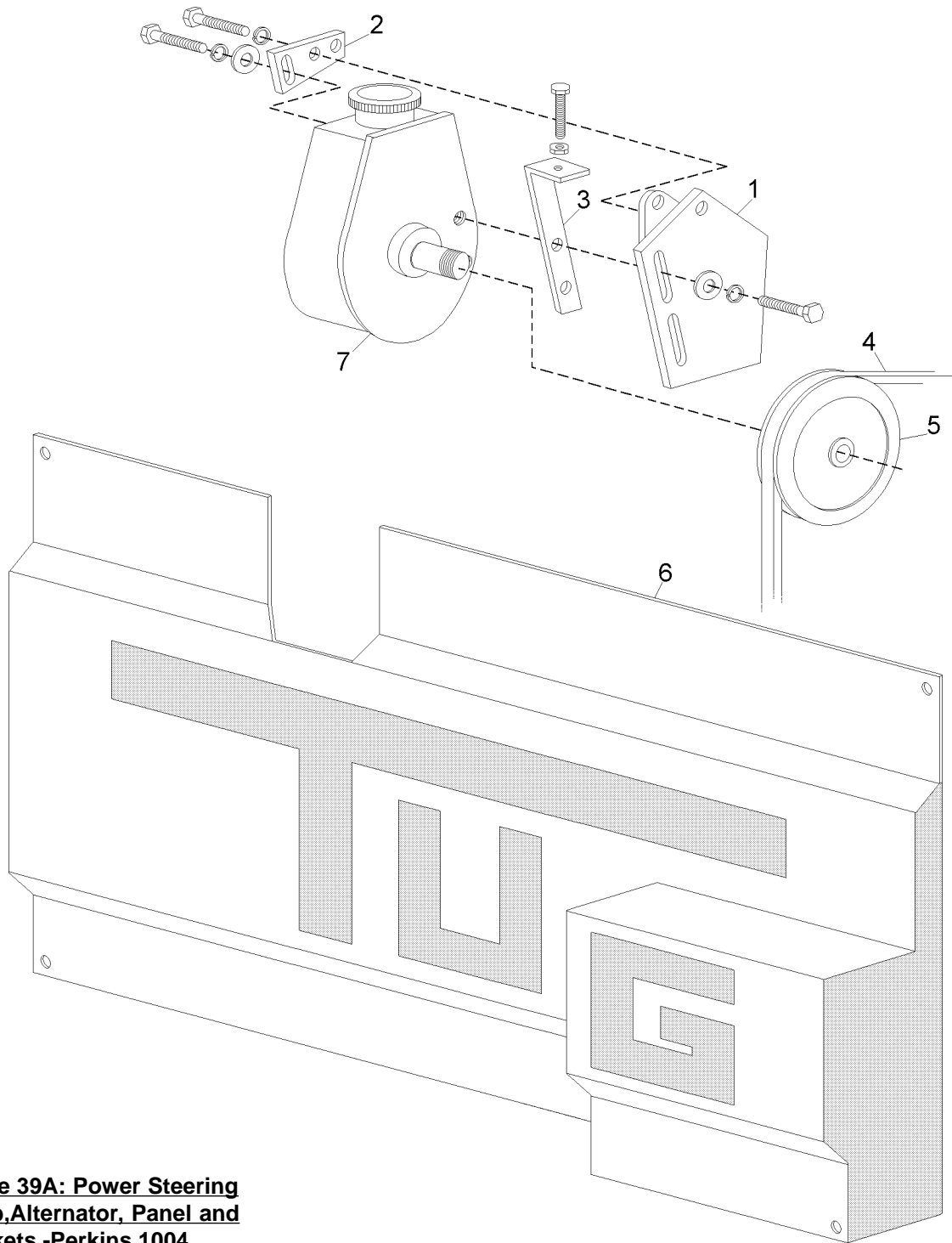
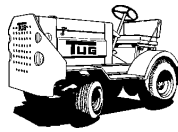


Figure 39: Power Steering Pump Installation

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
39-1	436	7818044	T6-5011-101	power steering pump	1	001 & Up
39-2	-----	-----	T6-6012-103	hose, power steering supply to valve	1	"
39-3	-----	-----	T6-6012-105	hose, power steering return to pump	1	"
39-4	-----	-----	#6	hose clamp	1	"
39-5	324	14025192	T6-5011-107	pulley, power steering pump	1	Note 1
	-----	14023172DA	T6-5011-108	pulley, Power steering -GM	1	As Req'd
	256	d9bz-3a733a	x2001-205	pulley, power steering pump	1	Note 2
39-6	127	15430	T6-5209-101	belt, power steering, perkins diesel engine	1	As Req'd
	127	15415	T6-6015-101	belt, power steering, gasoline engine, high-mount fan	1	001-2867
	127	15295	T6-6016-201	belt, power steering, gasoline engine, low-mount fan	1	2868 & Up
	127	15435	MH-1-539	belt. hi mount	1	As Req'd
39-	315	lk0060a	T6-1202-103	harmonic pulley, perkins diesel engine (note 3)	1	"
39-7	-----	-----	T6-5207-101	front bracket, power steering pump, perkins diesel engine	1	"
	-----	-----	MH-3-590	front bracket, power steering pump, gasoline engine	1	"
39-8	-----	-----	T6-5207-103	rear bracket, power steering pump, perkins diesel engine	1	"
	-----	-----	MH-3-592	rear bracket, power steering pump, gasoline engine	1	"
39-9	-----	-----	mh-1-542	power steering adjuster	1	As Req'd
39-10	-----	-----	3/8-16ncx2-1/2"	adjusting bolt	1	"
39-11	-----	-----	3/8-16nc	locknut	1	"
39-12	-----	-----	3/8-16ncx1-1/4"	hex head bolt	2	"
39-13	-----	-----	3/8-16ncx1"	hex head bolt	3	"
39-14	-----	-----	3/8	lock washer	5	"
39-15	-----	-----	3/8	flat washer	3	"
	-----	-----	T6-5011-117	P/S Heat Shield (Option)	1	"

1. As required in all units through serial number 2868 (including units equipped with gasoline engines with high-mount fans) and units equipped with diesel engines from serial number 2869.
2. As required in units equipped with gasoline engines with low-mount fans (units equipped with gasoline engines from serial number 2869).
3. Harmonic pulley T6-1202-103 includes fasteners.



**Figure 39A: Power Steering
Pump, Alternator, Panel and
Brackets -Perkins 1004**

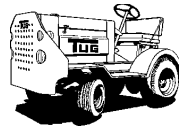


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
39a-1	----	-----	T6-5207-101	Power Steer Bracket	1	As Req'd
39a-2	----	-----	T6-5207-103	Power Steer Bracket, Rear	1	"
39a-3	245	-----	MH-1-542	Belt Adjuster, Power Steer Pump	1	"
39a-4	625	7450	660-ND-1646	Belt	1	"
39a-5	364	14023172DA	T6-5011-108	Power Steering Pulley, GM	1	"
39a-6	----	-----	T6-4206-106	Side Panel, Diesel	1	"
39a-7	264	7818044-B	T6-5011-101	Power Steering Pump Assembly	1	"

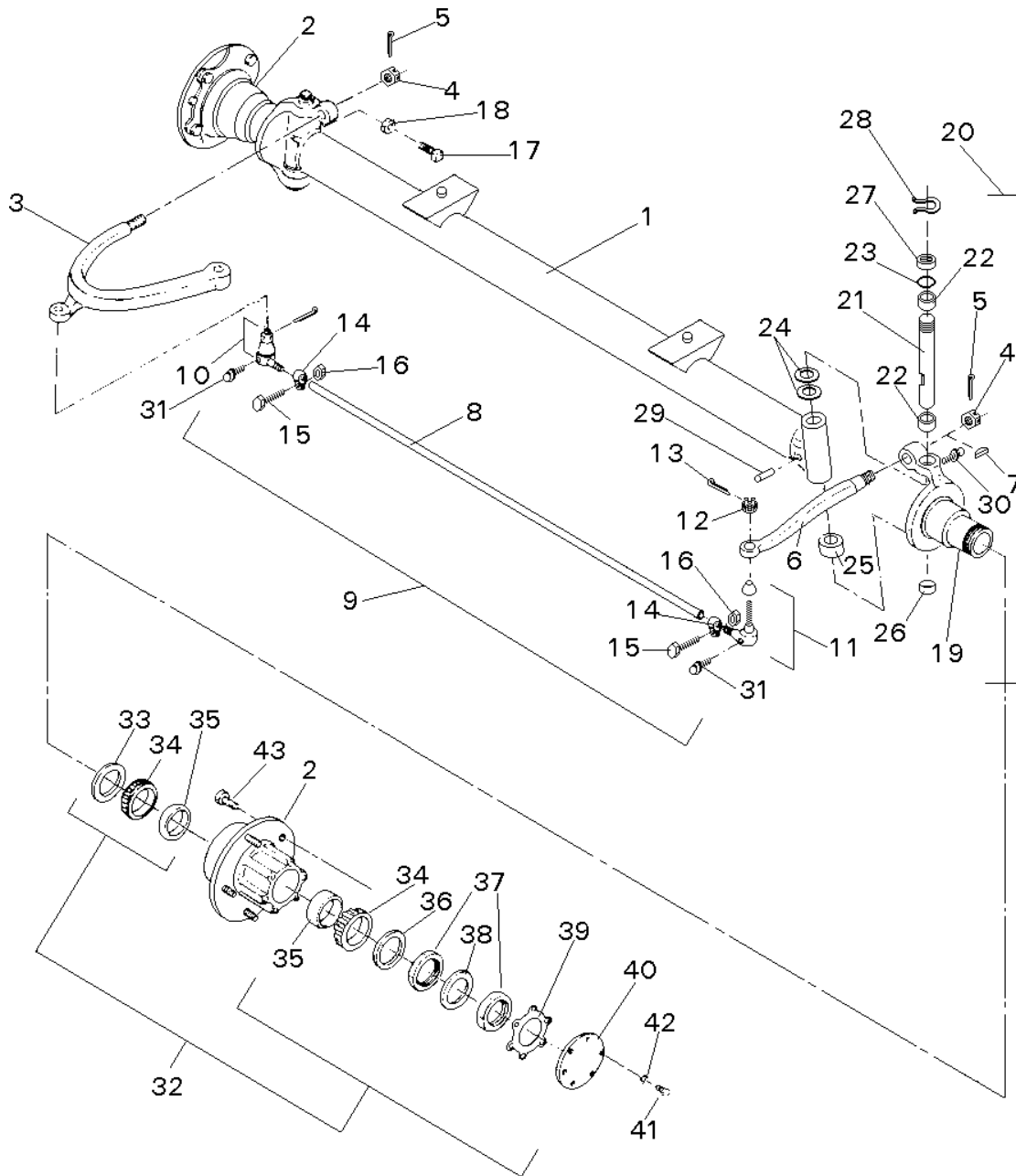
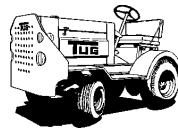


Figure 40: Rockwell Steer Axle Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
40-	171	fae951nx29	T6-3001-101	axle assembly, rockwell	1	001 & Up
40-1	171	a3100t-3530	T6-3001-127	axle shaft assembly	1	"
40-2	171	a1333c-1563	T6-3001-153	hub assembly, complete	2	"
40-3	171	3122e-733	T6-3001-137	spindle arm, lh, manual steering	1	As Req'd
	----	-----	T6-3001-137ps	spindle arm, lh, power steering	1	"
40-4	171	1227r-18	T6-3001-133	castellated nut, steer arm	2	001 & Up
40-5	----	-----	1/8x2"	cotter pin, steer arm	2	"
40-6	171	3133t-2932	T6-3001-129	spindle arm, rh	1	"
40-7	171	x654	T6-3001-131	key, steer arm	2	"
40-8	----	-----	T6-3001-141	tie rod	1	"
40-9	----	-----	T6-3001-139	tie rod assembly	1	"
40-10	215	es262l	T6-3001-143	tie rod end, lh	1	"
40-11	215	es262r	MD-501-140	tie rod end, rh	1	"
40-12	----	-----	5/8-18nf	castellated nut	2	"
40-13	----	-----	1/8X1"	COTTER PIN	2	"
40-14	----	-----	T6-3001-147	CLAMP, CONNECTING ROD	2	"
40-15	----	-----	5/16-18NCX1-1/2"	hex head bolt	2	"
40-16	----	-----	5/16-18nc	locknut	2	"
40-17	----	-----	T6-3001-109	stud, turn angle adjustment	2	"
40-18	----	-----	T6-3001-111	nut, turn angle adjustment	2	"
40-19	171	a13111u1139	T6-3001-104	spindle assembly, rh	1	"
40-	171	a13111t1138	T6-3001-103	spindle assembly, lh	1	"
40-20	22	2621476	T6-3001-183k	spindle bolt kit (note 1)	1	"
40-21	171	3101b106	T6-3001-113	spindle bolt	2	"
40-22	171	1225k531	T6-3001-115	bushing, spindle bolt	4	"
40-23	171	5x45r	T6-3001-181	oil seal	2	"
40-24	22	262-7035	T6-3001-121	shim set	2	"
40-25	141	t113	T6-3001-125	spindle bearing	2	"
40-26	22	219-1012	T6-3001-107	grease plug	2	"
40-27	171	1205e109	T6-3001-117	grease retainer	2	"

1. Spindle bolt kit T6-3001-183K (item 20) contains parts for both (left and right) spindle assemblies.

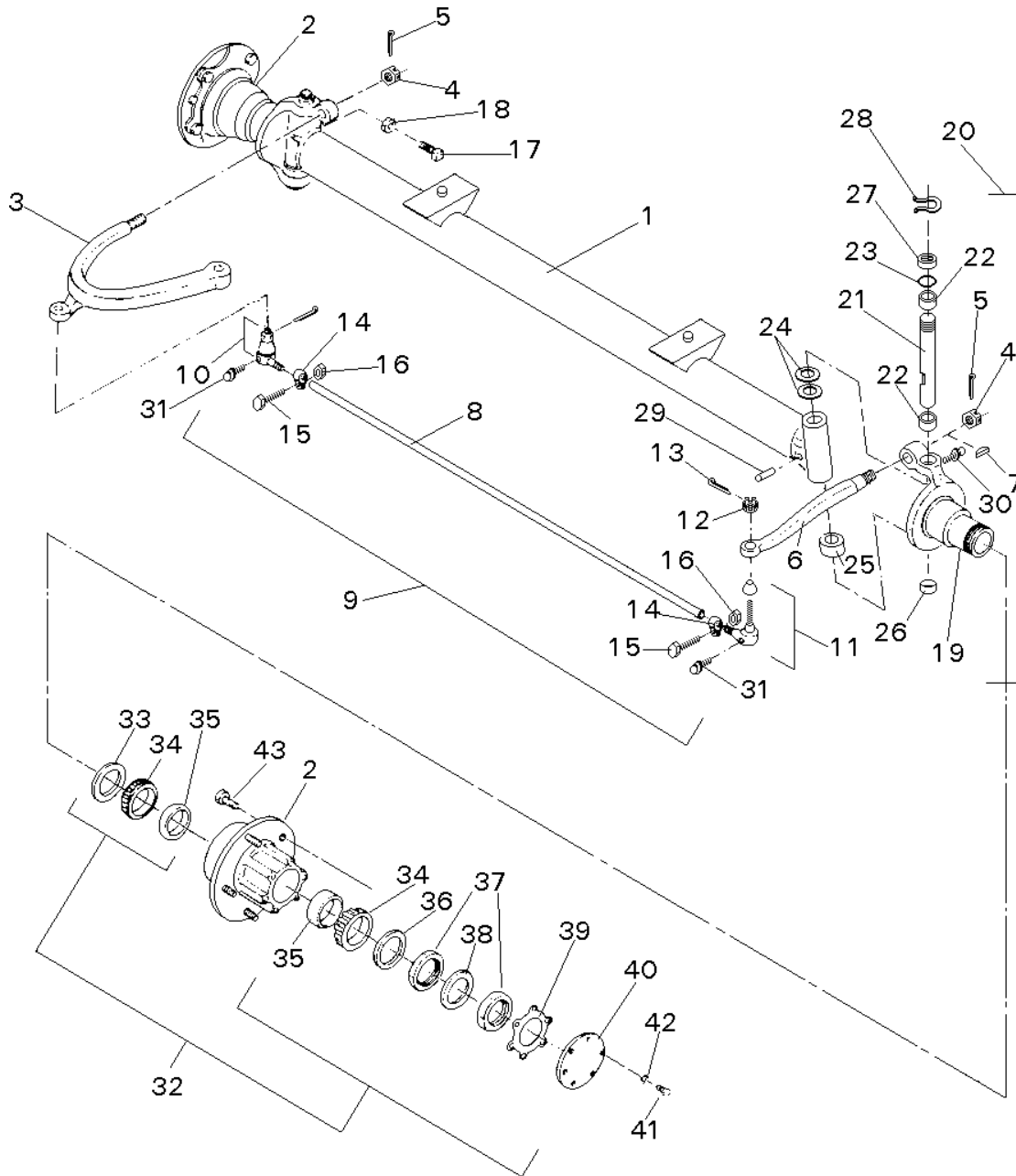
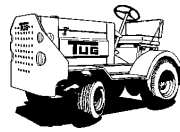


Figure 40: Rockwell Steer Axle Assembly

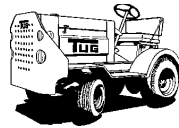


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
40-28	171	1229w115	T6-3001-119	clip, grease retainer	2	001 & Up
40-29	171	7x8	T6-3001-123	pin, spindle bolt	2	"
40-30	79	81500	-----	grease fitting	4	"
40-31	79	81511	-----	grease fitting	2	"
40-32	----	-----	T6-3001-501	bearing and seal kit, hub	2	"
40-33	127	40566-s	T6-3001-155	inner seal	2	"
40-34	141	18590	T6-3001-157	wheel bearing	4	"
40-35	141	18520	T6-3001-159	bearing cup	4	"
40-36	171	1229z-1924	T6-3001-167	outer washer	2	"
40-37	171	1227l-636	T6-3001-169	bearing adjustment nut	4	"
40-38	171	1229a-1925	T6-3001-171	washer, keyed	2	"
40-39	171	2208f-604	T6-3001-173	gasket	2	"
40-40	----	-----	T6-3001-175	cover plate, hub	2	"
40-41	----	-----	3/8-16ncx1-1/4"	hex head bolt	12	"
40-42	----	-----	3/8	lock washer	12	"
40-43	127	610-126	T6-3001-165	wheel stud	10	"
40-	----	-----	T6-3003-105	lug nut	10	"

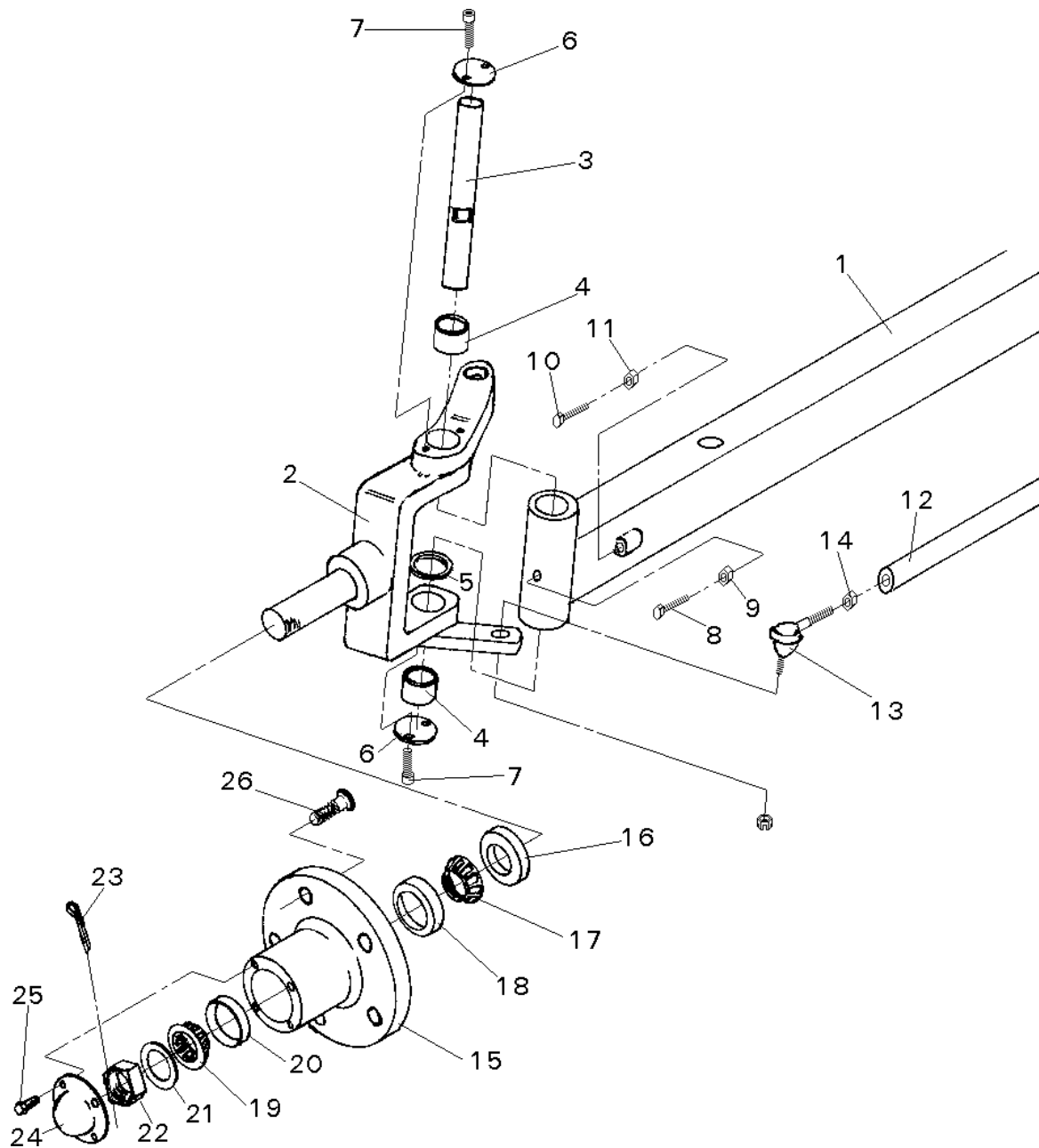
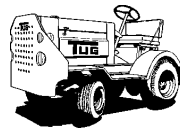


Figure 41: Brierton Steer Axle Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
41-	----	-----	T6-3001-600	axle assembly, brierton, without brakes	1	As Req'd
	----	-----	T6-3002-101	axle assembly, brierton, with brakes	1	"
41-1	----	-----	T6-3001-600-1	axle tube assembly, without brakes	1	"
	----	-----	T6-3002-101-21	axle tube assembly, with brakes	1	"
41-2	----	-----	T6-3001-600-2	knuckle assembly, lh, without brakes	1	"
	----	-----	T6-3002-101-19	knuckle assembly, lh, with brakes	1	"
41-	----	-----	T6-3001-600-3	knuckle assembly, rh, without brakes	1	"
	----	-----	T6-3002-101-20	knuckle assembly, rh, with brakes	1	"
41-3	----	-----	T6-3001-600-7	king pin, without brakes	2	"
	----	-----	T6-3002-101-18	king pin, with brakes	2	"
	171	3101B106	T6-3001-113	king pin	2	"
41-4	----	-----	T6-3001-115B	bushing, king pin, without brakes	4	"
	----	-----	T6-3002-101-17	bushing, king pin, with brakes	4	"
41-5	----	-----	T6-5001-125	thrust bearing	2	001 & Up
41-6	----	-----	T6-3001-600-5	cap, king pin	4	"
41-7	----	-----	T6-3001-600-6	socket head cap screw	8	"
41-8	----	-----	T6-3001-600-9	set screw, hex head, 5/16"	2	"
41-9	----	-----	T6-3001-600-10	jamb nut, 5/16"	2	"
41-10	----	-----	T6-3001-600-11	hex head bolt	2	"
41-11	----	-----	T6-3001-600-12	nut	2	"
41-12	----	-----	T6-3001-600-15	tube, tie rod, without brakes (note 1)	1	As Req'd
	----	-----	T6-3002-101-24	tube, tie rod, with brakes	1	"
41-13	----	-----	T6-3001-600-13	tie rod end, lh (note 1)	1	001 & Up
41-	----	-----	T6-3001-600-17	tie rod end, rh (note 1)	1	"

1. Tie rod assembly for axle without brakes T6-3001-600-18 includes tie rod ends T6-3001-600-13 (item 13) and T6-3001-600-17, jamb nuts T6-3001-600-14 (item 14) and T6-3001-600-16, and tie rod tube T6-3001-600-15 (item 12).

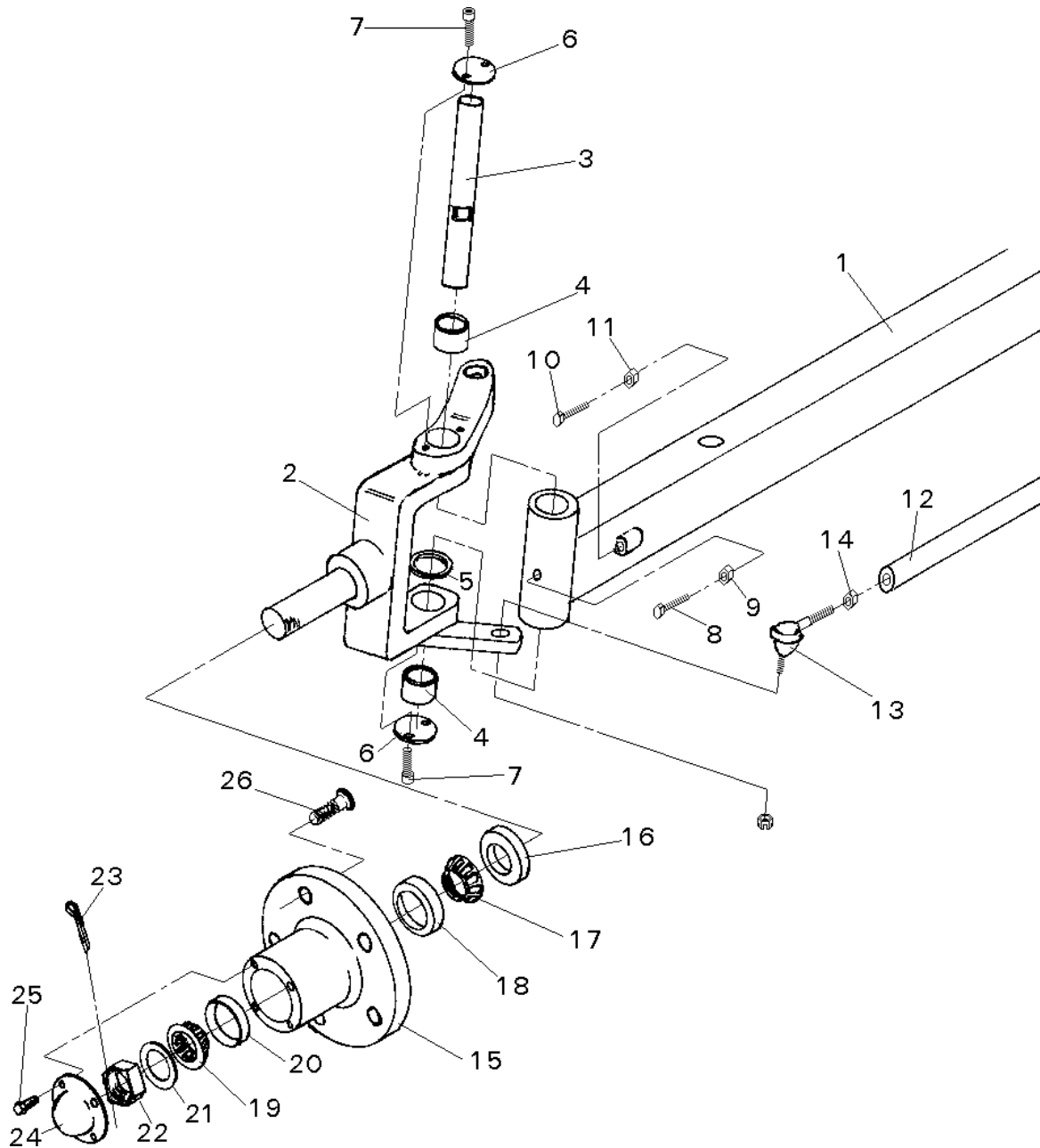
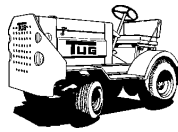


Figure 41: Brierton Steer Axle Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
41-14	----	-----	T6-3001-600-14	jamb nut, 3/4-16nf, lh (NOTE 1)	1	001 & Up
41-	----	-----	T6-3001-600-16	jamb nut, 3/4-16nf, rh (note 1)	1	"
41-	----	-----	T6-3001-600-18	tie rod assembly, without brakes (note 1)	1	As Req'd
41-15	----	-----	T6-3001-600-25	hub	2	001 & Up
41-16	----	-----	T6-3001-600-22	grease seal	2	"
41-17	----	-----	T6-3001-600-23	cone, inner bearing	2	"
41-18	----	-----	T6-3001-600-24	cup, inner bearing	2	"
41-19	----	-----	T6-3001-600-27	cone, outer bearing	2	"
41-20	----	-----	T6-3001-600-26	cup outer bearing	2	"
41-21	----	-----	T6-3001-600-28	spindle washer	2	"
41-22	----	-----	T6-3001-600-29	spindle nut	2	"
41-23	----	-----	T6-3001-600-30	cotter pin	2	"
41-24	----	-----	T6-3001-600-31	grease cap	2	"
41-25	----	-----	T6-3001-600-21	hex head bolt, #10-24	8	"
41-26	----	-----	T6-3001-600-20	wheel stud	10	"
41-	----	-----	T6-3003-105	lug nut	10	"
41-	----	-----	T6-3002-101-13	brake drum	2	As Req'd
41-	----	-----	T6-3002-101-14	brake, 8-1/2"x2-1/4"	2	"
41-	----	-----	T6-3002-103	bolt, brake line	2	"
41-	----	-----	T6-3002-105	connector, brake line	2	"
41-	----	-----	T6-3002-107	washer, brake line	4	"
41-	----	-----	T6-3001-600-40	hub assembly, complete (note 2)	2	"
41-	----	-----	T6-3001-600-50	hub kit (note 3)	2	"

1. Tie rod assembly for axle without brakes T6-3001-600-18 includes tie rod ends T6-3001-600-13 (item 13) and T6-3001-600-17, jamb nuts T6-3001-600-14 (item 14) and T6-3001-600-16, and tie rod tube T6-3001-600-15 (item 12).
2. Complete hub assembly T6-3001-600-40 includes items 41-15 through 41-26.
3. Hub kit T6-3001-625K includes items 41-16 through 41-23.

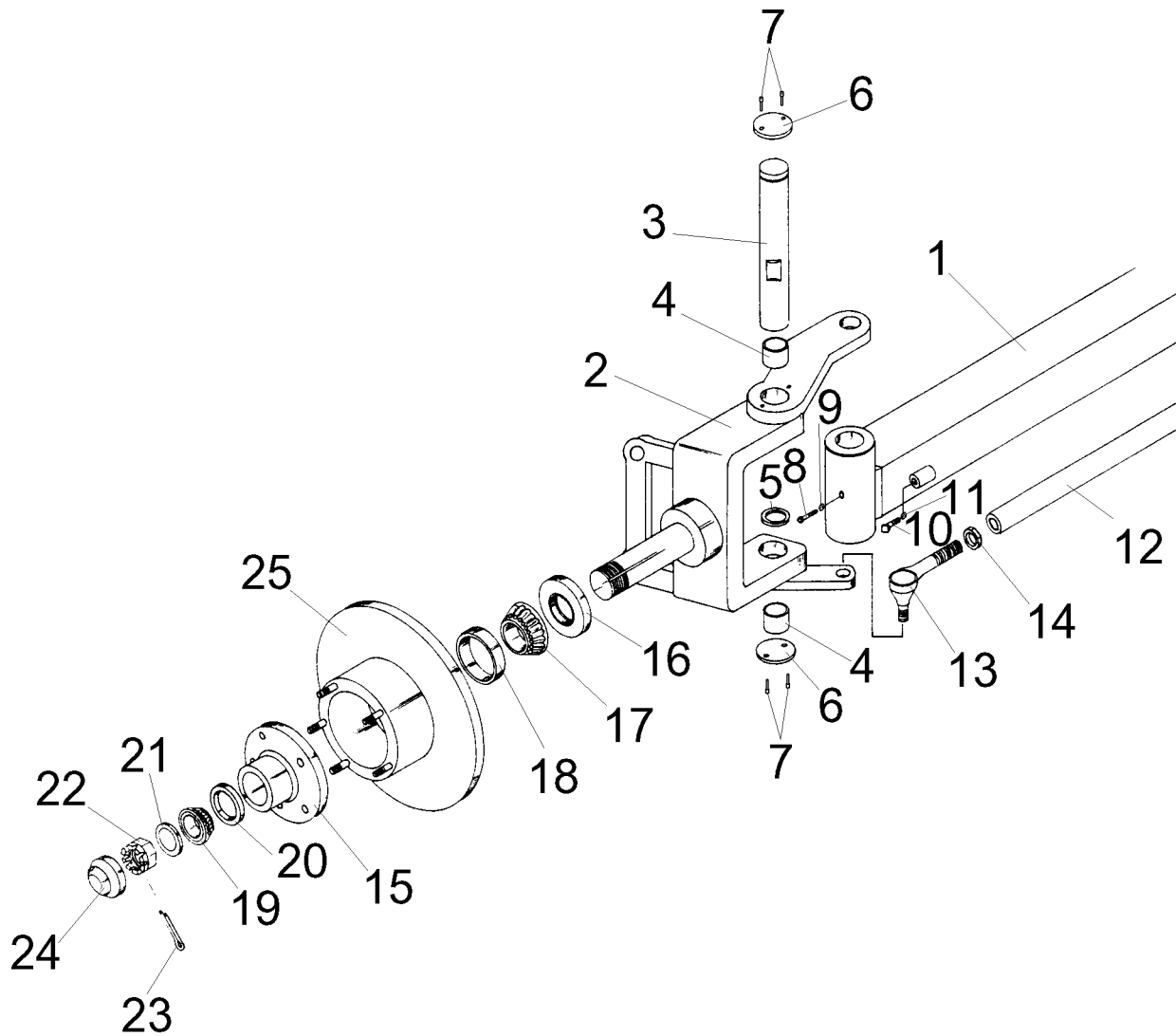
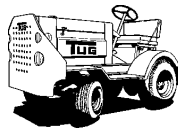
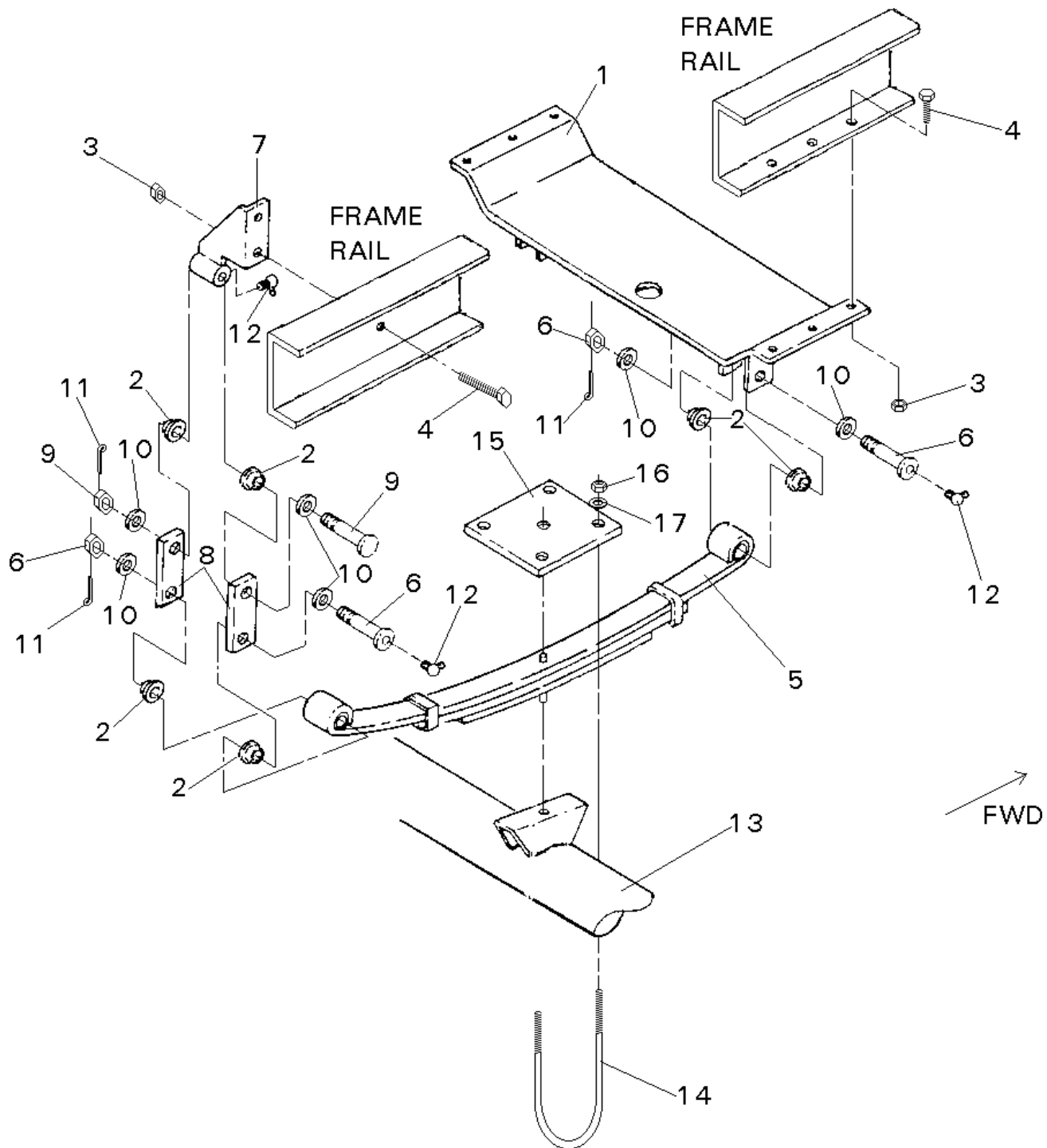
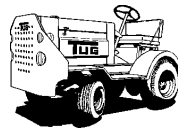


Figure 41A: Steer Axle Assembly, Disk Brakes

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
41a-	----	-----	T6-3002-102	Axle Assembly w/front disc brakes	1	As Req'd
41a-1	----	-----	T6-3002-102-1	Axle Tube	1	"
41a-2	----	-----	T6-3002-102-4	Knuckle, LH	1	"
41a-	----	-----	T6-3002-102-3	Knuckle, rH	1	"
41a-3	----	-----	T6-3001-600-7	king pin	2	"
41a-4	----	-----	T6-3001-600-8	king pin bushing	4	"
41a-5	----	-----	T6-3001-600-4	thrust bearing	2	"
41a-6	----	-----	T6-3001-600-5	king pin cap	4	"
41a-7	----	-----	T6-3001-600-6	king pin cap screw	8	"
41a-8	----	-----	T6-3001-600-9	set screw, 5/16"	2	"
41a-9	----	-----	T6-3001-600-10	jam nut	2	"
41a-10	----	-----	T6-3001-600-11	hex head bolt	2	"
41a-11	----	-----	T6-3001-600-12	nut	2	"
41a-12	----	-----	T6-3002-102-2	tie rod tube	1	"
41a-13	----	-----	T6-3001-600-13	tie rod end, lh	1	"
41a-	----	-----	T6-3001-600-17	tie rod end, rh	1	"
41a-14	----	-----	T6-3001-600-14	jam nut, 3/4-16, lh	1	"
41a-	----	-----	T6-3001-600-16	jam nut, 3/4-16, rh	1	"
41a-15	----	-----	T6-3001-600-25	hub	2	"
41a-16	----	-----	T6-3001-600-22	grease seal	2	"
41a-17	----	-----	T6-3001-600-23	cone, inner bearing	2	"
41a-18	----	-----	T6-3001-600-24	cup, inner bearing	2	"
41a-19	----	-----	T6-3001-600-27	cone, outer bearing	2	"
41a-20	----	-----	T6-3001-600-26	cup, outer bearing	2	"
41a-21	----	-----	T6-3001-600-28	spindle washer	2	"
41a-22	----	-----	T6-3001-600-29	spindle nut	2	"
41a-23	----	-----	T6-3001-600-30	cotter pin	2	"
41a-24	----	-----	T6-3001-600-31	grease cap	2	"
41a-25	----	-----	T6-3002-102-5	rotor	2	"



**Figure 42: Steer Axle Installation,
Serial Numbers 001 Through 134**

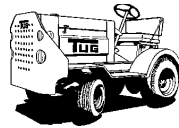
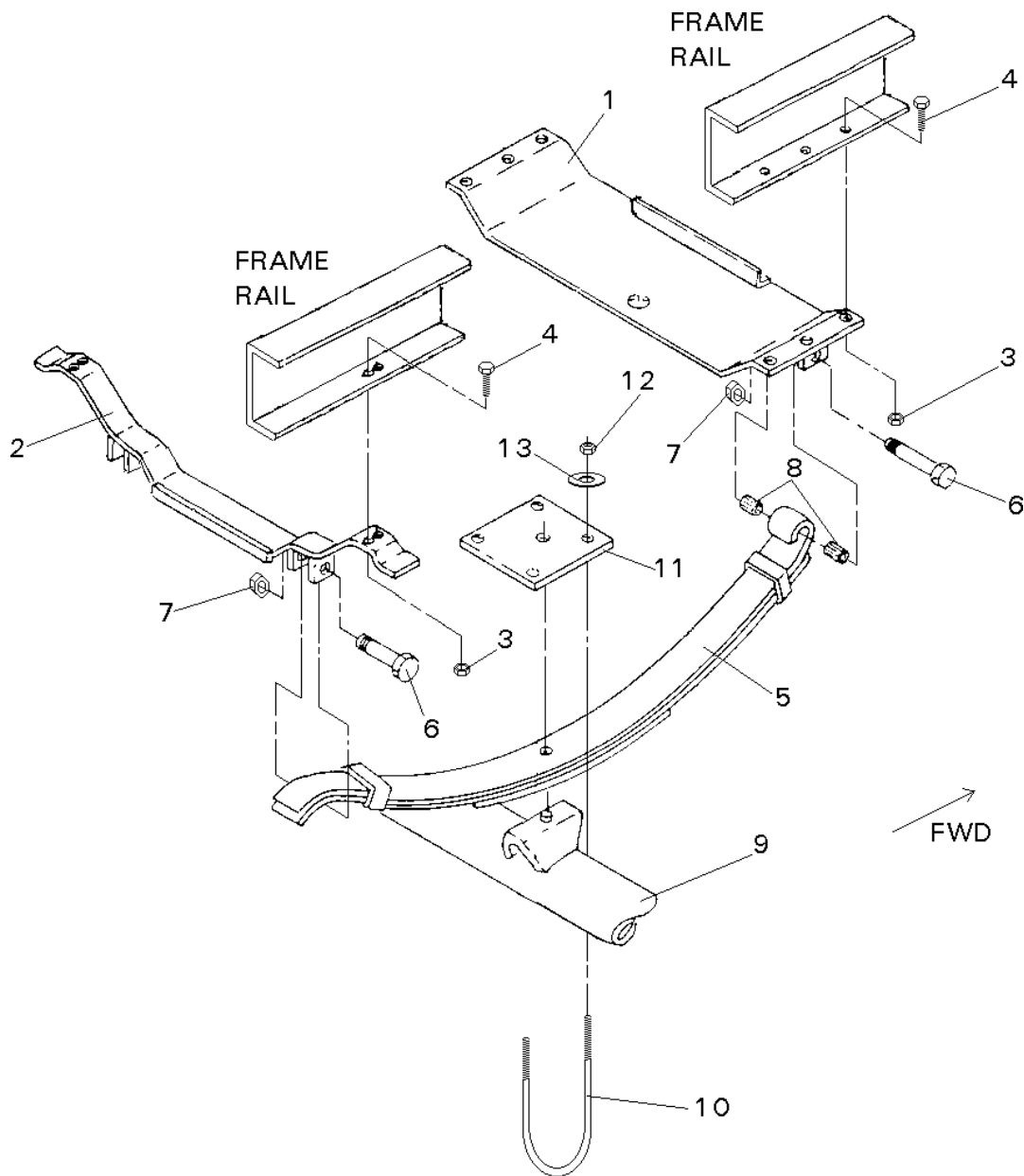
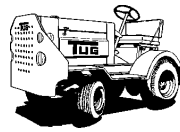


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
42-1	----	-----	T6-4007-103	PLATE ASSEMBLY, FRONT SPRING MOUNT	1	001-020
		-----	T6-4007-113	PLATE ASSEMBLY, FRONT SPRING MOUNT	1	021-134
42-2	62	SF2836-12	T6-4007-115	BUSHING, FLANGED	12	001-134
42-3	----	-----	3/8-16NC	LOCKNUT	10	"
42-4	----	-----	3/8-16NCX1-1/4"	HEX HEAD BOLT	10	"
42-5	----	-----	T6-4009-101	SPRING ASSEMBLY	2	"
42-6	357	B1040/SN105	T6-4009-103	Pin and Nut Assembly (w/ grease fitting hole)4	"	
42-7	----	-----	T6-4008-103	Front Spring Rear Bracket, RH	1	001-020
		-----	T6-4008-104	Front Spring Rear Bracket, RH	1	021-134
42-	----	-----	T6-4008-113	Front Spring Rear Bracket, LH	1	001-020
		-----	T6-4008-114	Front Spring Rear Bracket, LH	1	021-134
42-8	----	-----	T6-4008-105	STRAP ASSEMBLY	4	001-134
42-9	----	-----	T6-4008-109	Pin and Nut Assembly (w/o grease fitting hole)	2	"
42-10	----	-----	7/8	flat washer	12	"
42-11	----	-----	1/8x1-1/4"	cotter pin	6	"
42-12	79	81511	-----	grease fitting	6	"
42-13	171	fae951nx29	T6-3001-101	steer axle, rockwell	1	001 & Up
42-14	----	-----	T6-3000-109	u-bolt	4	"
42-15	----	-----	T6-3000-105	plate, steer axle	2	"
42-16	----	-----	1/2-20nf	locknut	8	"
42-17	----	-----	1/2	flat washer	8	"



**Figure 43: Steer Axle Installation,
Serial Numbers 135 & Up**

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
43-1	-----	-----	T6-4007-159	plate assembly, front spring mount	1	135-234
	-----	-----	T6-4007-165	plate assembly, front spring mount	1	235-310
	-----	-----	T6-4007-169	plate assembly, front spring mount	1	311-361
	-----	-----	T6-4007-171	plate assembly, front spring mount	1	362 & Up
43-2	-----	-----	T6-4031-101	support assembly, front spring, aft (obsolete)	1	135-234
	-----	-----	T6-4036-101	support assembly, front spring, aft (obsolete)	1	235-3070
	-----	-----	T6-1212-103	support assembly, front spring, aft (current)	1	3071 & Up
43-3	-----	-----	3/8-16nc	locknut	10	001 & Up
43-4	-----	-----	3/8-16ncx1-1/4"	hex head bolt	10	"
43-5	-----	-----	T6-4035-101	spring assembly	2	135-234
	208	3500a1	T6-4039-101	spring assembly, standard (4 leaf)	2	235 & Up
	208	3500a14	T6-4027-511	spring assembly, soft-ride (5 leaf)	2	As Req'd
43-6	-----	-----	9/16-12ncx3-1/2"	hex head bolt	4	135 & Up
43-7	-----	-----	9/16-12nc	locknut	4	"
43-8	208	exp3-11	T6-4042-101	nylon bushing	4	"
43-9	171	fae951nx29	T6-3001-101	steer axle, rockwell	1	As Req'd
	375	o4-40169	T6-3001-600	steer axle, brierton, without brakes	1	"
	375	o4-40173	T6-3002-101	steer axle, brierton, with brakes	1	"
43-10	-----	-----	T6-3000-109	u-bolt, rockwell axle	4	"
	-----	-----	T6-3002-201	u-bolt, brierton axle	4	"
43-11	-----	-----	T6-3000-105	clamping plate, rockwell steer axle	2	"
	-----	-----	T6-3002-202	clamping plate, brierton steer axle	2	"
43-12	-----	-----	1/2-20nf	locknut	8	"
43-13	-----	-----	1/2	flat washer	8	"

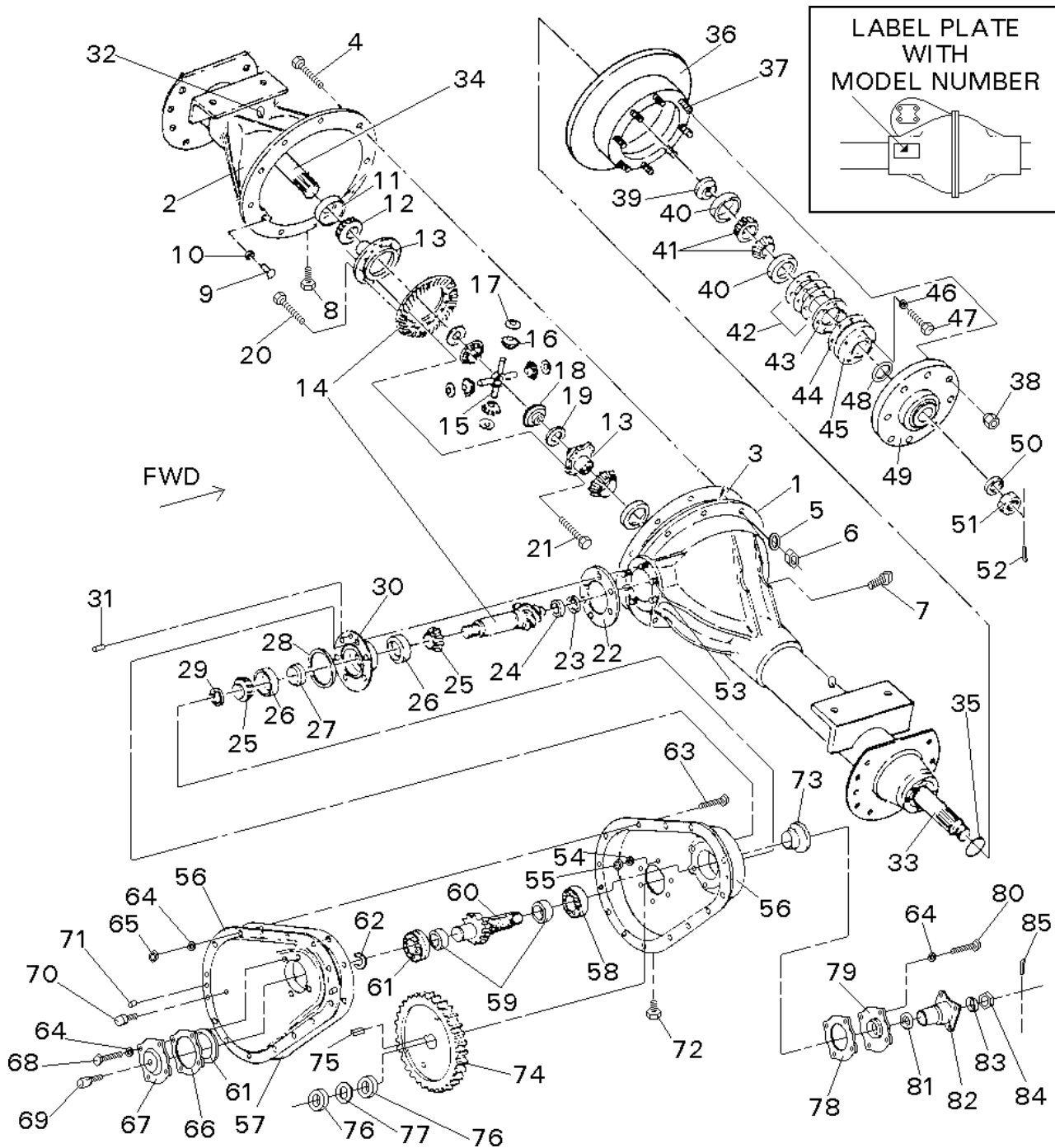
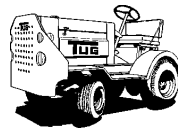


Figure 44: Rockwell Drive Axle and Reduction Gear Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
44-	----	-----	T6-2001-101wb	drive axle and reduction gear assembly, Solid mount	1	As Req'd
	----	-----	T6-2001-101sr	drive axle and reduction gear assembly, Spring mount	1	"
44-1	171	a25-3800-d-654	T6-2001-139	differential and axle housing assembly, rh	1	001-4019
	171	a623800d654	T6-2001-602	differential and axle housing assembly, rh	1	4020 & Up
44-2	171	a55-3800-x-570	T6-2001-133	differential and axle housing assembly, lh	1	001-4019
	----	-----	T6-2001-601	differential and axle housing assembly, lh	1	4020 & Up
44-3	171	1199t3842	T6-2001-157	gasket, oil seal (rtv sealant)	1	001 & Up
44-4	171	s-1714-1	T6-2001-145	hex head bolt	11	"
44-5	171	1229-e-1513	T6-2001-147	flat washer	11	"
44-6	171	nl17-1	T6-2001-149	locknut	11	"
44-7	171	p-112	T6-2001-143	lubricant fill plug, differential housing	1	"
44-8	171	1250-s-123	T6-2001-137	lubricant drain plug, differential housing	1	"
44-9	171	1246-d-134	T6-2001-153	pin, bevel gear thrust block	1	"
44-10	171	2297-s-175	T6-2001-155	thrust block, bevel gear	1	"
44-11	62	3920	T6-2001-151	cup, differential bearing	2	"
44-12	62	3984	T6-2001-107	differential bearing	2	"
44-13	171	a-3235-f-214	T6-2001-109	flange	1	"
44-14	171	a40498-7	T6-2001-111	gear and pinion set	1	"
44-15	171	3278-t-72	T6-2001-123	spider	1	"
44-16	171	2233-m-429	T6-2001-125	pinion gear	4	"
44-17	171	1229-u-1061	T6-2001-127	pinion thrust washer	4	"
44-18	171	2234-k-427	T6-2001-121	side gear	2	"
44-19	171	1229-v-412	T6-2001-119	thrust washer	2	"
44-20	171	946	T6-2001-291	bolt kit (note 1)	1	"
44-21	171	s-2822-1	T6-2001-131	cap screw, differential and gear assembly	8	"
44-22	171	2808-f-942	T6-2001-193	gasket, bevel pinion cage	1	"
44-23	171	1229-y-1299	T6-2001-195	lock ring	1	"
44-24	141	u1305tm	T6-2001-197	bevel pinion pilot bearing	1	"

1. Bolt kit T6-2001-291 (item 20) is used to replace rivets when rivets are removed.

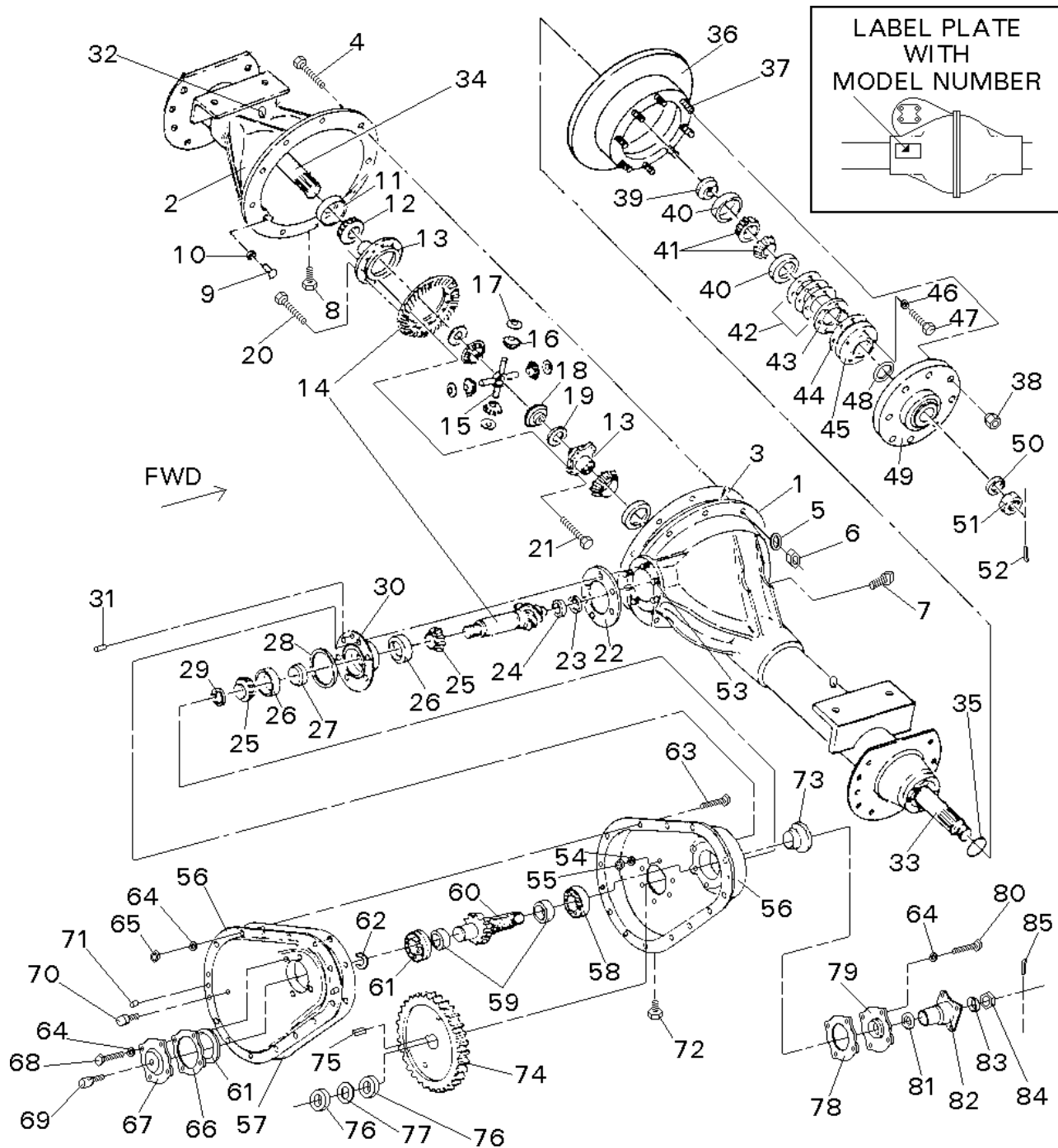
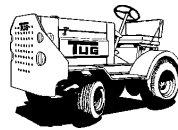


Figure 44: Rockwell Drive Axle and Reduction Gear Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
44-25	171	hm-803149	T6-2001-199	pinion bearing	2	001 & Up
44-26	171	hm-803110	T6-2001-201	cup, pinion bearing	2	"
44-27	----	-----	T6-2001-209	spacer, bearing (obsolete)	1	As Req'd
44-28	171	5x424	T6-2001-207	gasket, oil seal	1	001 & Up
44-29	171	1129-g-813	T6-2001-211	washer, key way	1	"
44-30	171	mps-2260	T6-2001-203	cage assembly, pinion bearing	1	"
44-31	171	1246-c-211	T6-2001-205	dowel	1	"
44-32	171	a-1199-j-166	T6-2001-135	breather	1	"
44-33	171	a-3802-d-1252	T6-2001-161	long axle shaft (r/h)	1	001-4019
	171	a3202z9152	T6-2001-604	long axle shaft (l/h)	1	4020 & Up
44-34	171	a-3802-c-1251	T6-2001-163	short axle shaft	1	001-4019
	171	a3202x9150	T6-2001-603	short axle shaft	1	4020 & Up
44-35	171	3780-c-185	T6-2001-608	o-ring	2	"
44-36	----	-----	T6-8009-101	rotor	2	001-4019
	171	a3218c1069	T6-2001-605	rotor	2	4020 & Up
44-37	----	-----	T6-8015-103	serrated wheel stud	16	001-4019
	----	-----	T6-8015-103a	long serrated wheel stud	16	As Req'd
	171	20x2085	T6-2001-607	wheel stud	16	4020 & Up
44-38	204	1/2-20	T6-3003-105	lug nut	16	001 & Up
44-39	171	1874-e-187	T6-2001-165	collar, bearing spacer	2	"
44-40	62	18720	T6-2001-167	bearing cup	4	"
44-41	62	18790	T6-2001-169	axle bearing	4	"
44-42	171	2803-t-2100	T6-2001-171	shim set, axle	2	"
44-43	171	1244-a-261	T6-2001-173	bearing retainer	2	"
44-44	171	2808-v-672	T6-2001-175	gasket, oil seal retainer	2	"
44-45	171	a-1805-n-560	T6-2001-177	retainer, oil seal	2	"
44-46	171	wa-16	T6-2001-179	lock washer	12	"
44-47	171	s26101	T6-2001-181	cap screw, bearing retainer	12	"
44-48	----	-----	T6-2001-185	spacer	2	001-2116
44-49	171	311q511	T6-8003-601	hub, wheel rotor	2	001-4019
	171	311j1024	T6-2001-606	hub	2	4020 & Up
44-50	171	1829-u-775	T6-2001-187	washer, axle nut	2	001 & Up
44-51	171	1227-b-496	T6-2001-189	axle nut	2	"
44-52	171	k-2418	T6-2001-191	cotter pin	2	"

2. Spacer T6-2001-185 (item 48) is original equipment on axle models TA-267NX1 through TA-267NX4 with original hubs (prior to serial number 2000). It is not used with replacement hub T6-8003-601.

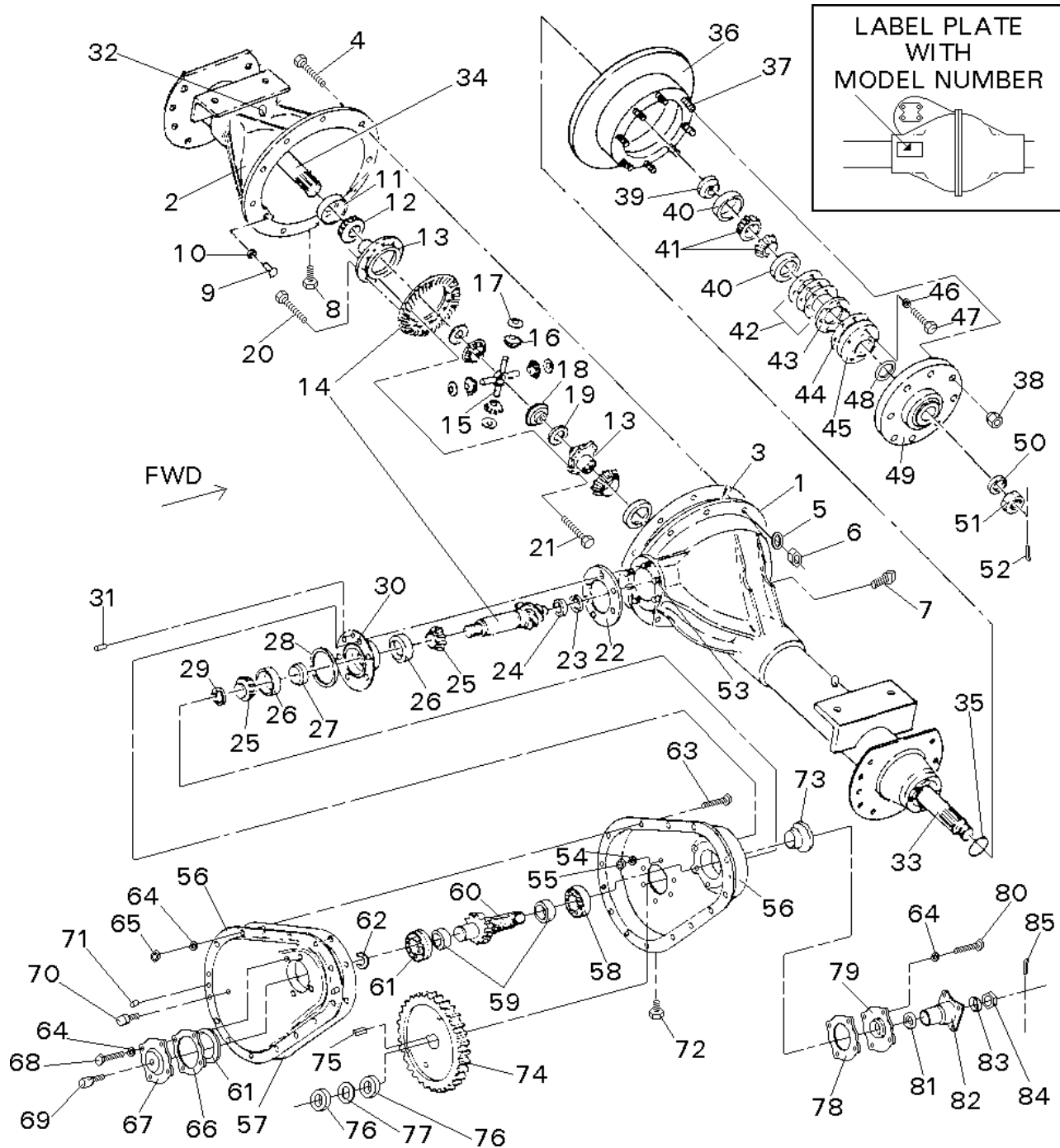
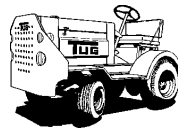


Figure 44: Rockwell Drive Axle and Reduction Gear Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
44-53	171	sn-920-1	T6-2001-141	stud, reduction gear box to axle housing	6	001 & Up
44-54	171	1229-y-1507	T6-2001-217	washer, gear case to axle housing	6	"
44-55	171	nl19-1	T6-2001-219	nut, gear case to axle housing	6	"
44-56	171	a-3875-a-651	T6-2001-215	case and cover assembly, reduction gear	1	Note 2
	171	3289-q-1031	T6-2001-327	case and cover assembly, reduction gear	1	Note 3
44-57	171	2808-x-622	T6-2001-257	gasket, reduction gear box	1	001 & Up
44-58	141	1207k	T6-2001-247	bearing, input shaft, front	1	"
44-59	171	1844-a-131	T6-2001-249	spacer, input shaft bearing	2	"
44-60	171	3892-c-4163	T6-2001-251	input gear and shaft	1	Note 2
	171	3892-x-5172	T6-2001-321	input gear and shaft	1	Note 3
44-61	171	1228-v-308	T6-2001-253	bearing with snap ring	1	Note 2
	171	1228-t-1216	T6-2001-325	bearing with snap ring	1	Note 3
44-62	171	1854-m-169	T6-2001-255	snap ring, input shaft bearing	1	001 & Up
44-63	----	-----	7/16-14ncx1-3/4"	bolt, gear box cover	15	"
44-64	----	-----	7/16	lock washer	Ref.	"
44-65	----	-----	7/16-14nc	locknut, gear box cover	15	"
44-66	171	2808-c-913	T6-2001-267	gasket, input shaft cap	1	"
44-67	171	3866-a-989	T6-2001-269	cap, input shaft, rear	1	Note 2
	171	3266-a-1171	T6-2001-329	cap, input shaft, rear	1	Note 3
44-68	171	s-268-1	T6-2001-273	cap screw, input shaft rear cover	4	001 & Up
44-69	171	a1199c1043	T6-2001-271	oil breather, gear box	1	"
44-70	171	p-18	T6-2001-265	fill plug, gear box oil	1	"
44-71	171	1846-c-159	T6-2001-263	dowel, gear box cover	1	"
44-72	171	1250-u-125	T6-2001-245	drain plug, gear box, magnetic	1	"

3. Used on all units equipped with Rockwell drive axles through serial number 6047. These tractors are equipped with Rockwell drive axle model TA-267HDB102 with spur-type gears. See insert, FIGURE 44 for location of model number on axle.
4. Used on all units equipped with Rockwell drive axles from serial number 6048. These tractors are equipped with Rockwell drive axle model TA-267HDB113 with helical gears. See insert, FIGURE 44 for location of model number on axle.

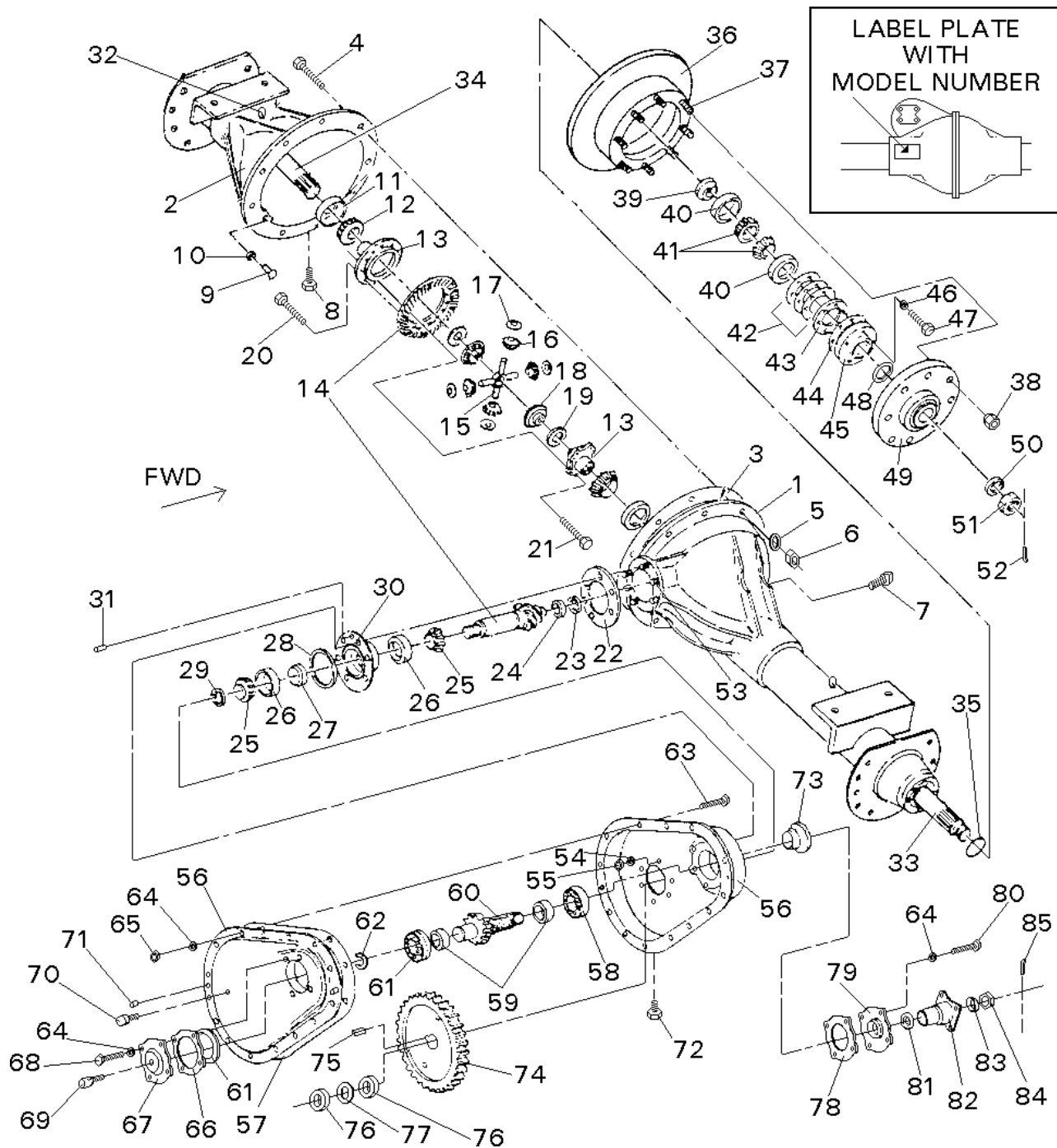
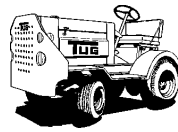


Figure 44: Rockwell Drive Axle and Reduction Gear Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
44-73	171	a-11805-v-204	T6-2001-213	oil seal, reduction gear box	1	001 & Up
44-74	171	3892-x-1142	T6-2001-221	driven gear	1	Note 2
	171	3892-y-5173	T6-2001-323	driven gear	1	Note 3
44-75	171	16x71	T6-2001-223	key, gear	1	001 & Up
44-76	171	1227-m-117	T6-2001-225	nut, bevel pinion bearing	2	"
44-77	171	1229-h-528	T6-2001-227	locknut, bevel pinion bearing	1	"
44-78	171	2808-c-913	T6-2001-267	gasket, input shaft, front cap	1	"
44-79	171	3266N100Z	T6-2001-237	cap, input shaft, front	1	001 - 6047
	171	3266A1171	T6-2001-237	cap, input shaft, front	1	6048 & Up
44-80	171	s-2610-2	T6-2001-241	cap screw, input shaft front cover	4	001 & Up
44-81	141	CR17746	T6-2001-235	oil seal, input shaft	1	"
44-82	171	3897-z-1430	T6-2001-233	flange, input shaft	1	"
44-83	171	1829-t-592	T6-2001-231	washer, input shaft	1	"
44-84	171	1227g943	T6-2001-281	nut, input shaft	1	"
44-85	171	2412	T6-2001-229	cotter pin, input shaft nut	1	"

3. Used on all units equipped with Rockwell drive axles through serial number 6047. These tractors are equipped with Rockwell drive axle model TA-267HDB102 with spur-type gears. See insert, FIGURE 44 for location of model number on axle.

4. Used on all units equipped with Rockwell drive axles from serial number 6048. These tractors are equipped with Rockwell drive axle model TA-267HDB113 with helical gears. See insert, FIGURE 44 for location of model number on axle.

5. Axle shaft kit T6-2001-501K includes items 39 through 45.

6. Gasket and seal kit T6-2001-601K includes items 22, 28, 42, 44, 45, 57, 66, 78 and 81 and RTV sealant T6-2001-157.

7. Shim size .003 is Tug part T6-2001-172; Rockwell #2803-5-2099.

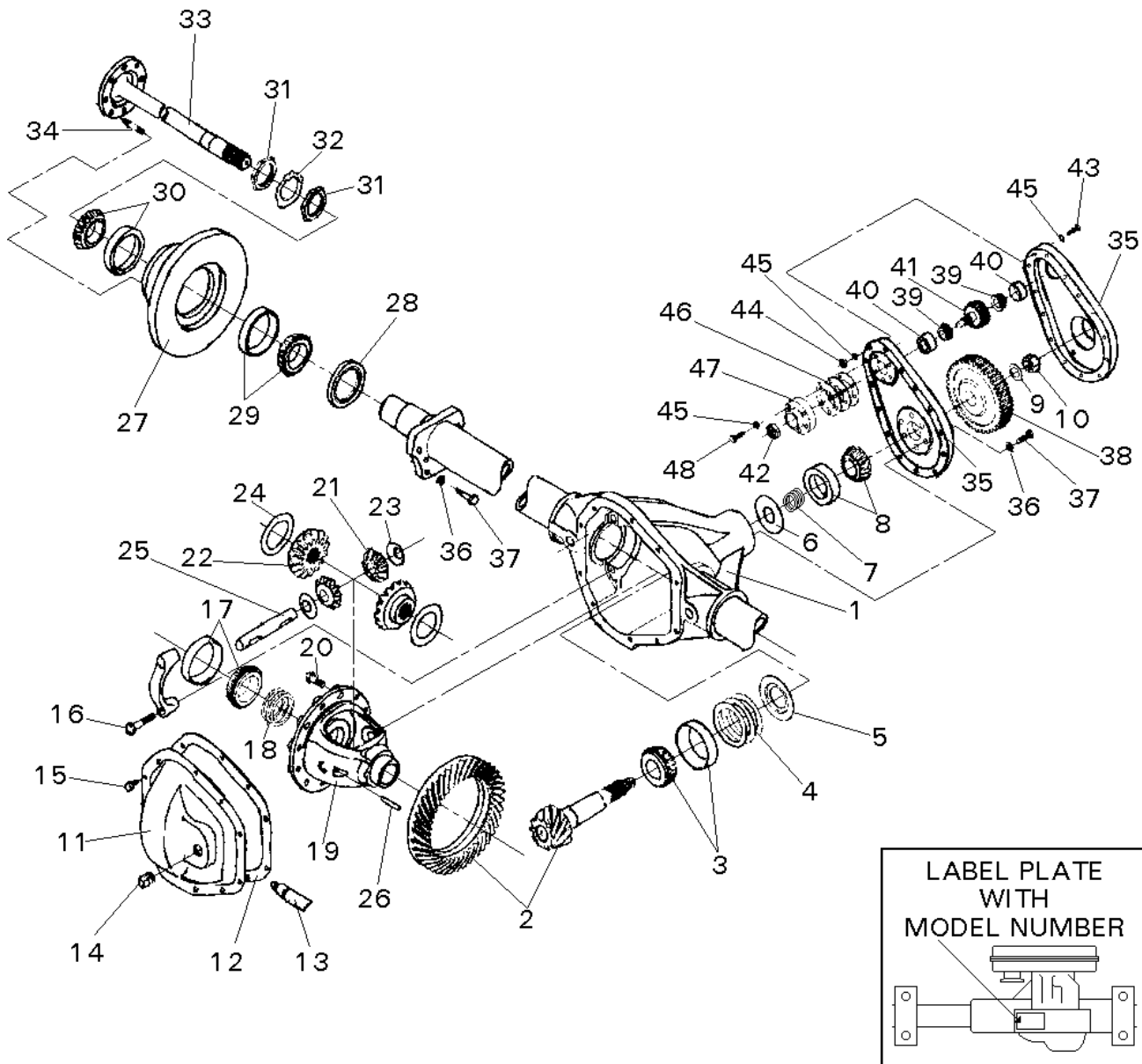
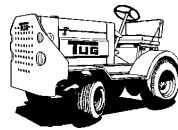
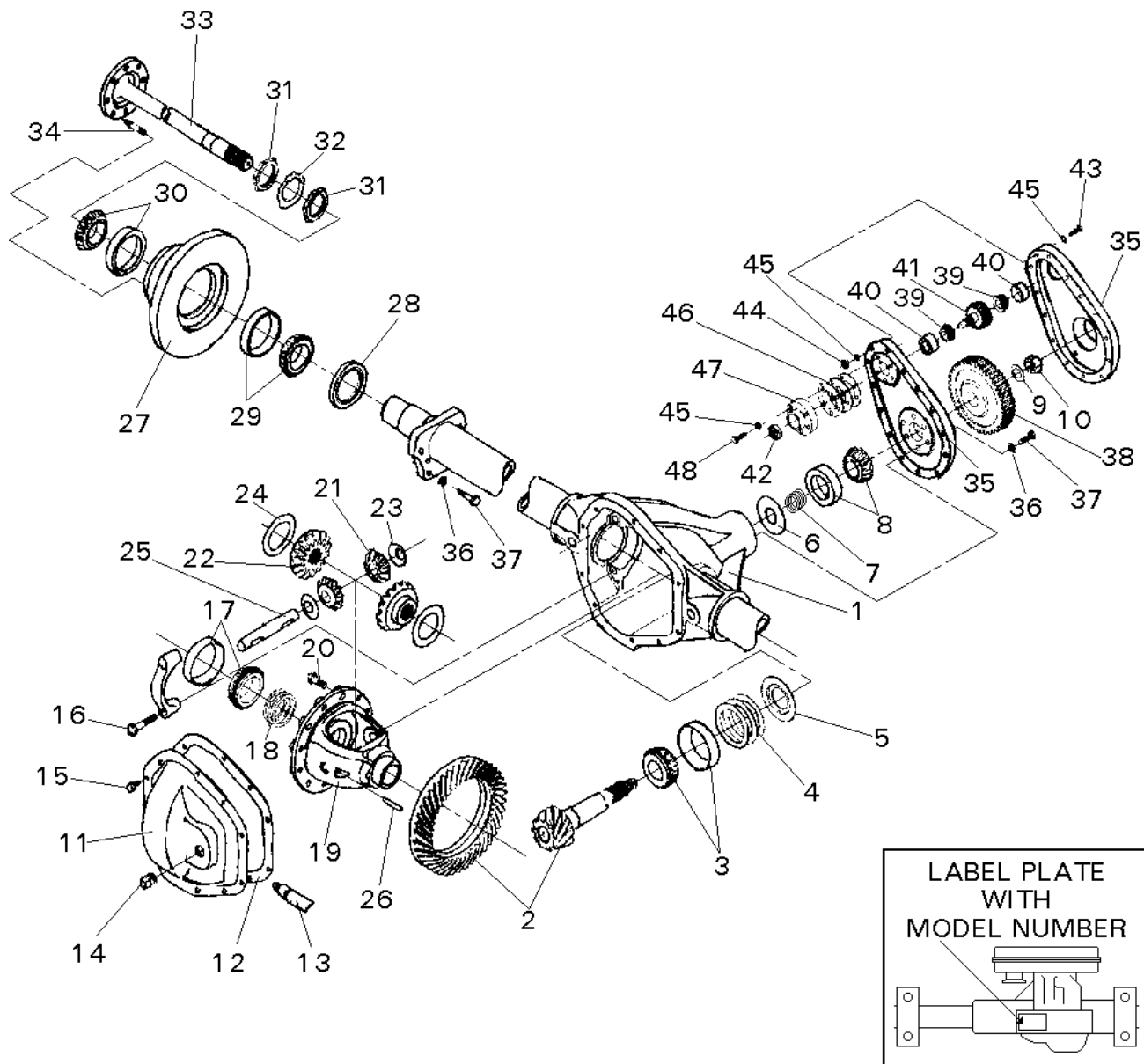
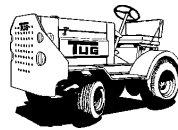


Figure 45: Dana Drive Axle and Reduction Gear Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
45-	----	-----	T6-2011-800	complete drive axle assembly	1	001 & Up
45-1	193	o70ch130-x	T6-2011-801	axle and differential housing	1	Note 1
	193	o70ch265-x	T6-2011-873	axle and differential housing	1	Note 2
45-2	----	-----	note 3	drive gear and pinion	1	001 & Up
45-3	193	706060-x	T6-2011-803	inner pinion bearing (note 4)	1	"
45-4	----	-----	note 3	shim, drive pinion adjusting	Ref.	"
45-5	----	-----	note 3	baffle, pinion bearing	1	"
45-6	----	-----	note 3	spacer, flat	1	"
45-7	----	-----	note 3	Shim, pinion bearing adjusting	Ref.	"
45-8	193	706045-x	T6-2011-807	outer pinion bearing and cup (note 4)	1	"
45-9	193	30275	T6-2011-811	washer, pinion nut (note 4)	1	"
45-10	193	30271	T6-2011-812	pinion nut (note 4)	1	"
45-11	----	-----	note 3	carrier cover	1	"
45-12	193	34685	-----	gasket, carrier cover (notes 4,5)	1	As Req'd
45-13	193	38615	-----	rtv sealant (notes 4,5)	1	"
45-14	193	36472	T6-2001-816	carrier cover plug (note 4)	1	001 & Up
45-15	193	34822	T6-2011-817	bolt, carrier cover (note 4)	10	"
45-16	193	500400-20	T6-2011-819	bolt, differential bearing (note 4)	2	"
45-17	193	706070-x	T6-2011-820	differential bearing and cup (note 4)	1	"

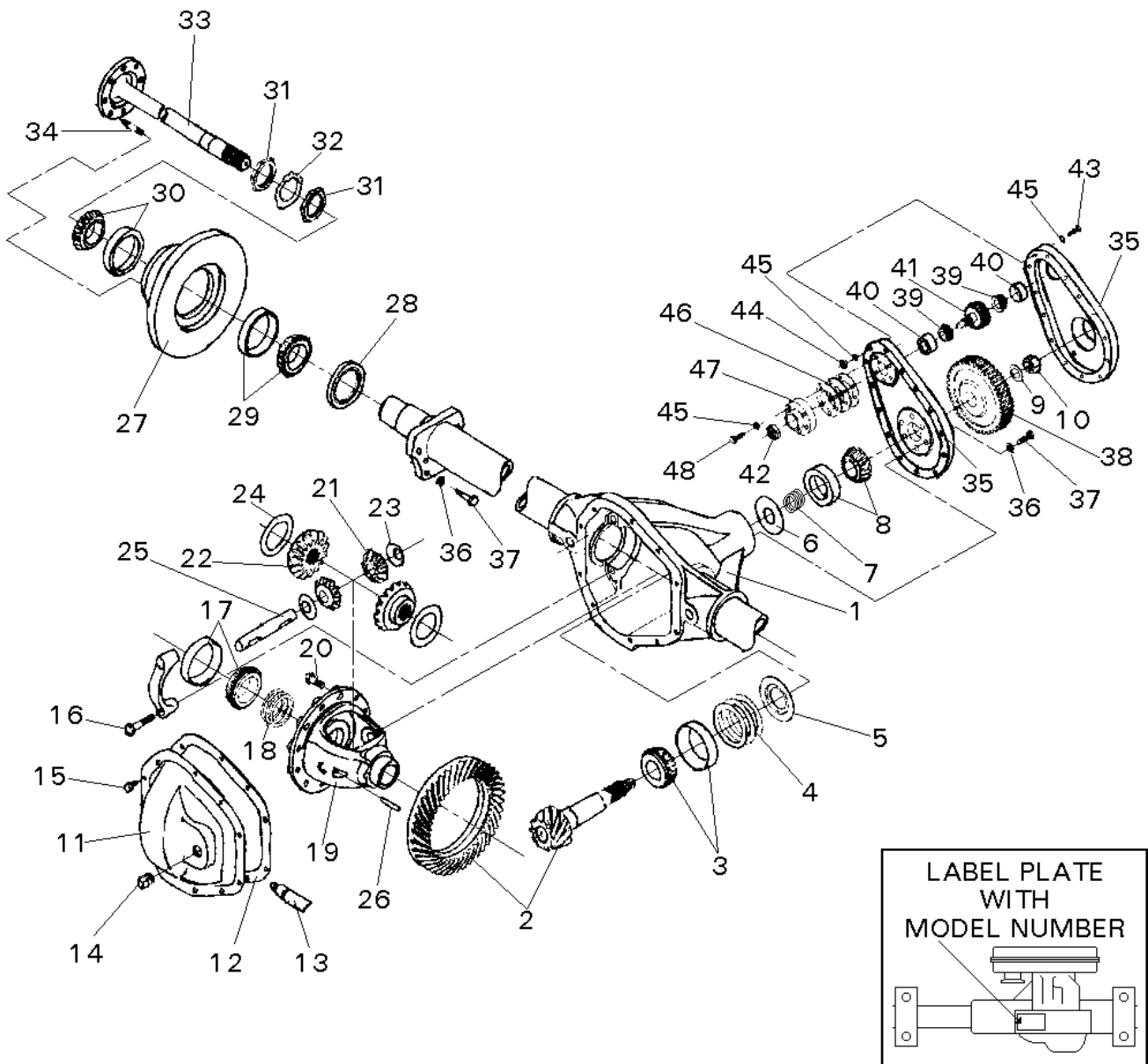
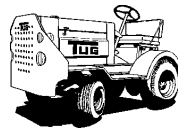
1. Used on all units equipped with Dana drive axles through serial number 6967. These tractors are equipped with Dana drive axle model 070-AF-109-4 with spur-type gears. See insert, FIGURE 45 for location of model number on axle.
2. Used on all units equipped with Dana drive axles from serial number 6968. These tractors are equipped with Dana drive axle models 070-AF-109-5 and 070-AF-138-1 with helical gears. See insert, FIGURE 45 for location of model number on axle.
3. These parts are not available individually. See service kits T6-2011-858 through T6-2011-866 for parts availability.
4. See service kits T6-2011-858 through T6-2011-866 for additional parts availability.
5. Service ribbed cover with gasket 34685 (item 12); service smooth cover with RTV sealant 38615 (item 13).



**Figure 45: Dana Drive Axle
and Reduction Gear Assembly**

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
45-18	----	-----	note 3	shim, differential bearing	Ref.	001 & Up
45-19	193	o7cb108-x	T6-2011-822	case, differential (note 4)	1	"
45-20	193	40683	T6-2011-823	bolt, drive gear (note 4)	12	"
45-21	----	-----	note 3	pinion, differential	2	"
45-22	----	-----	note 3	gear, differential	2	"
45-23	----	-----	note 3	thrust washer, differential pinion	2	"
44-24	----	-----	note 3	thrust washer, differential gear	2	"
45-25	----	-----	note 3	shaft, differential	1	"
45-26	----	-----	note 3	lock, differential shaft	1	"
45-27	193	070hu140-x	T6-2051-136	hub with rotor (note 6)	2	"
45-28	193	o77hh106	T6-2011-832	oil seal	2	"
45-29	193	o77hc103-x	T6-2011-833	inner wheel bearing and cup	2	"
45-30	193	706074-x	T6-2011-834	outer wheel bearing and cup	2	"
45-31	193	35270	T6-2011-837	spindle nut	4	"
45-32	193	35269	T6-2011-838	lock washer, spindle nut	2	"
45-33	193	35091-8a	T6-2011-840r	axle shaft, flanged, rh	1	Note 1
	193	35091-37	T6-2011-870r	axle shaft, flanged, rh	1	Note 2
45-	193	35091-25	T6-2011-840l	axle shaft, flanged, lh	1	Note 1
	193	35091-36	T6-2011-870l	axle shaft, flanged, lh	1	Note 2
45-34	193	36847	T6-2011-836	stud, hub	16	001 & Up
45-35	----	-----	T6-2011-839	cover, reduction gear	1	"

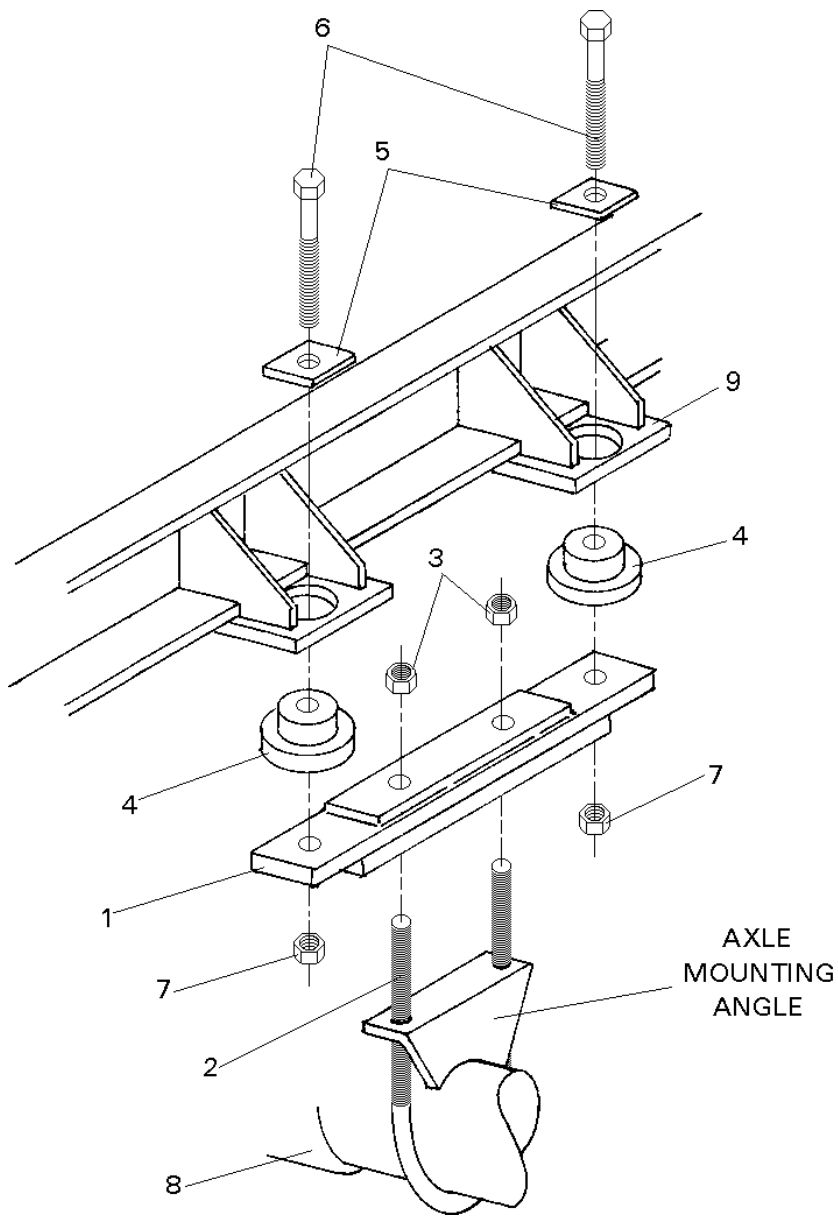
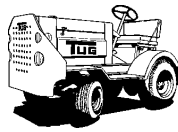
1. Used on all units equipped with Dana drive axles through serial number 6967. These tractors are equipped with Dana drive axle model 070-AF-109-4 with spur-type gears. See insert, FIGURE 45 for location of model number on axle.
2. Used on all units equipped with Dana drive axles from serial number 6968. These tractors are equipped with Dana drive axle models 070-AF-109-5 and 070-AF-138-1 with helical gears. See insert, FIGURE 45 for location of model number on axle.
3. These parts are not available individually. See service kits T6-2011-858 through T6-2011-866 for parts availability.
4. See service kits T6-2011-858 through T6-2011-866 for additional parts availability.
5. Service ribbed cover with gasket 34685 (item 12); service smooth cover with RTV sealant 38615 (item 13).
6. Two-piece hub and rotor assembly is no longer available. Existing two-piece hub and rotor assemblies should be replaced with single-piece hub and rotor T6-2051-136 (item 27).



**Figure 45: Dana Drive Axle
and Reduction Gear Assembly**

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
45-36	193	h505290	T6-2011-844	flat washer	18	001 & Up
45-37	193	o70hm124-4	T6-2011-843	hex head bolt	18	"
45-38	193	o70gs124	T6-2011-845	reduction gear, spur-type	1	Note 1
	193	o70gs131	T6-2011-871	Reduction gear, helical	1	Note 2
45-39	193	565957	T6-2011-846-1	spur gear bearing	2	001 & Up
45-40	193	565958	T6-2011-846-2	cup, spur gear bearing	2	"
45-41	193	o70gs126	T6-2011-847	reduction pinion, spur-type	1	Note 1
	193	o70gs132	T6-2011-872	Reduction pinion, helical	1	Note 2
45-42	193	o70hh104	T6-2011-809	seal, pinion	1	001 & Up
45-43	193	o70hm103	T6-2011-850	hex head bolt	14	"
45-44	193	o70hn102	T6-2011-851	nut	14	"
45-45	193	h506822	T6-2011-852	lock washer	33	"
45-46	193	o70hs101-1	T6-2011-853-1	shim, adjusting, .003"	Ref.	As Req'd
	193	o70hs101-2	T6-2011-853-2	shim, adjusting, .005"	Ref.	"
	193	o70hs101-3	T6-2011-853-3	shim, adjusting, .020"	Ref.	"
45-47	193	o70cp101	T6-2011-854	cap, bearing retainer	1	001 & Up
45-48	193	o70hm105	T6-2011-855	hex head bolt	5	"
45-	193	2-1-2221	-----	companion flange assembly	1	"
45-	193	30185	T6-2011-856	pinion nut	1	"
45-	193	30186	T6-2011-857	washer, pinion nut	1	"
45-	193	706999-9x	T6-2001-858	kit, drive gear and pinion assy (includes items 2 thru 10, 12, 13, 18 and 20)	1	"
45-	193	72150-5x	T6-2001-859	kit, drive gear and pinion (includes items 2, 6, 9, 10 and 20)	1	"
45-	193	706731-x	T6-2001-860	kit, differential case assembly (includes items 17 through 26)	1	"
45-	193	706732-x	T6-2011-861	kit, differential case (includes items 18, 19, 20 and 26)	1	001 & Up
45-	193	706602-x	T6-2011-862	kit, differential parts (includes items 12, 13 and 20 through 26)	1	"
45-	193	706603-x	T6-2011-863	kit, pinion and bearing adjustment shims (incl. items 4, 7, 9, 10, 12 and 13)	1	"
45-	193	706713-x	T6-2011-864	kit, differential adjusting shims (incl. items 12, 13 and 18)	1	"
45-	193	766714-x	T6-2011-865	kit, differential and pinion shims (includes items 4, 7, 9, 10, 12, 13 and 18)	1	"
45-	193	707102-x	T6-2011-866	kit, gear carrier cover assembly (includes items 11 through 15)	1	"
45-	-----	-----	T6-3003-105	lug nut	16	"

1. Used on all units equipped with Dana drive axles through serial number 6967. These tractors are equipped with Dana drive axle model 070-AF-109-4 with spur-type gears. See insert, FIGURE 45 for location of model number on axle.
2. Used on all units equipped with Dana drive axles from serial number 6968. These tractors are equipped with Dana drive axle models 070-AF-109-5 and 070-AF-138-1 with helical gears. See insert, FIGURE 45 for location of model number on axle.



**Figure 46: Drive Axle Installation,
Solid Mount**

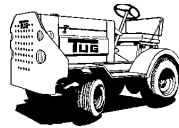


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
46-1	—	-----	T6-2000-115	plate assembly, solid mount (note 1)	2	001 & Up
46-2	—	-----	T6-2002-201	u-bolt, rear	2	3525 & Up
	—	-----	3/4-10NCX3-1/2"	hex head bolt	4	001-3524
46-3	—	-----	3/4-16NF	locknut	4	3525 & Up
	—	-----	3/4-10NC	locknut	4	001 & Up
46-	—	-----	T6-4020-103	mounting bracket assembly, bolt-on	4	001-177
46-	—	-----	3/8-16NCX1-1/4"	hex head bolt, mounting bracket assembly	8	"
46-	—	-----	3/8-16NC	locknut, mounting bracket assembly	8	"
46-	—	-----	1/2-13NCX1-3/4"	hex head bolt, mounting bracket assembly	4	"
46-	—	-----	1/2-13NC	locknut, mounting bracket assembly	4	"
46-4	92	9565	T6-4020-115	rubber mount	4	001 & Up
46-5	—	-----	T6-4020-113	washer, solid mount	4	"
46-6	—	-----	3/4-10NCX4-1/2"	hex head bolt	4	"
46-7	—	-----	3/4-10NC	locknut	4	"
46-8	—	-----	T6-2001-101WB	drive axle assembly, rockwell	1	As Req'd
	—	-----	T6-2011-800	drive axle assembly, dana	1	"
46-9	—	-----	T6-4020-203	L/H MOUNTING BRACKET	2	"
	—	-----	T6-4020-205	R/H MOUNTING BRACKET	2	"

1. Solid mount plate assembly T6-2000-115 (item 1) is not used on units with 22-inch long axle mounting angles.

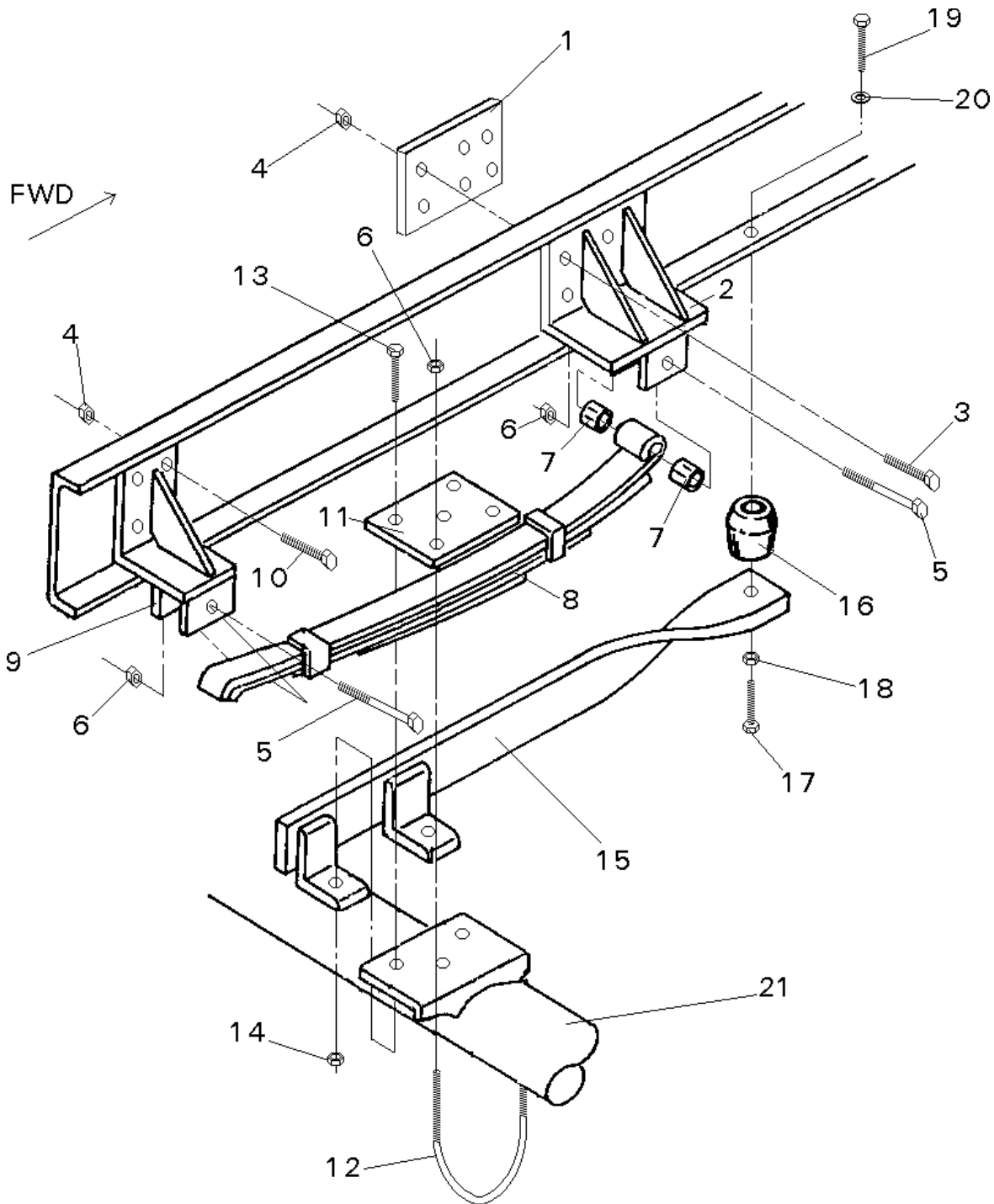
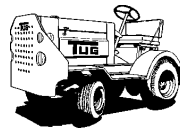
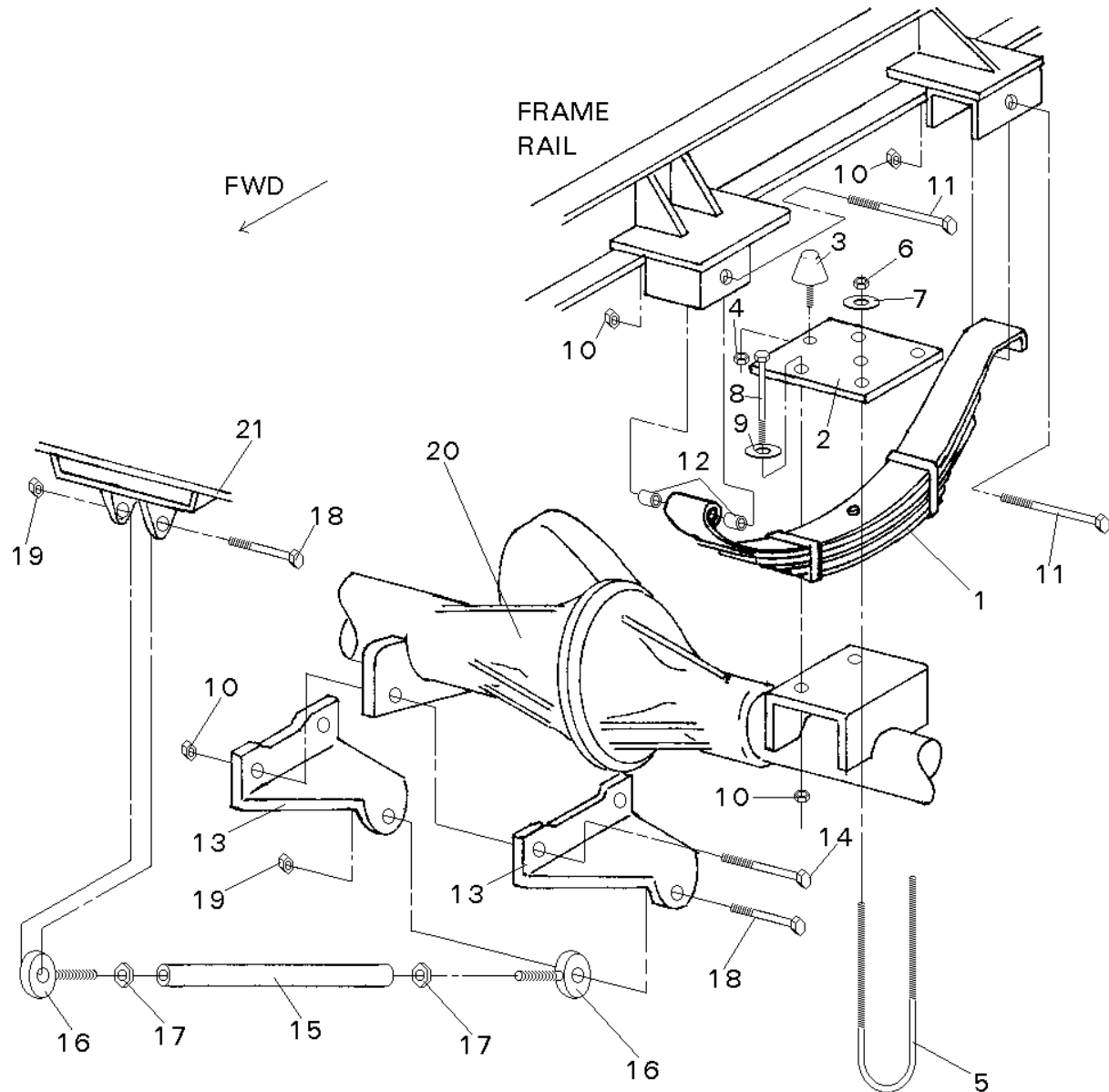
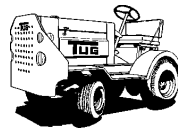


Figure 47: Drive Axle Installation, Spring Mount, SerialNumbers 178 Through 926

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
47-1	—	-----	T6-4037-109	rear spring doubler	2	178-926
47-2	—	-----	T6-4037-102	rear spring forward support, rH	1	"
47-	—	-----	T6-4037-101	rear spring forward support, lH	1	"
47-3	—	-----	3/8-16NCX1-1/2"	hex head bolt	12	"
47-4	—	-----	3/8-16NC	locknut	20	"
47-5	—	-----	9/16-12NCX3-1/2"	hex head bolt	4	"
47-6	—	-----	9/16-12NC	locknut	8	"
47-7	76	EXP3-11	T6-4042-101	nylon bushing	4	"
47-8	208	P21244	T6-4041-105OS	rear spring assembly, eye at front, slipper at back	2	As Req'd
	208	3500A2	T6-4041-105	rear spring assembly, eye at front and back	2	178-926
47-9	—	-----	T6-4029-101	rear spring aft support	2	"
47-10	—	-----	3/8-16NCX1-1/4"	hex head bolt	8	"
47-11	—	-----	T6-4040-103	spring mounting plate	2	"
47-12	—	-----	T6-2107-103	u-bolt, rear	2	"
47-13	—	-----	1/2-13NCX3-1/2"	hex head bolt	4	"
47-14	—	-----	1/2-13NC	locknut	4	"
47-15	—	-----	T6-2009-104	traction bar, rH	1	547-926
47-	—	-----	T6-2009-103	traction bar, lH	1	"
47-16	92	50X55	T6-4012-107	snubber	2	"
47-17	—	-----	1/2-13NCX7/8"	hex head bolt	2	"
47-18	—	-----	1/2-13NC	locknut	2	"
47-19	—	-----	1/2-13NCX1"	hex head bolt	2	"
47-20	—	-----	1/2	flat washer	2	"
47-21	—	-----	T6-2001-101WB	drive axle assembly, rockwell	1	"
47-	—	-----	T6-2012-103	SUPPORT, L/H	1	AS REQ'D
47-	—	-----	T6-2012-105	SUPPORT, R/H	1	"
47-	—	-----	MD-D01-105	SUPPORT, 3-HOLE	1	"
47-	—	-----	T6-2012-107	SUPPORT, 2-HOLE	1	"



**Figure 48: Drive Axle Installation, Spring Mount,
Serial Numbers 6626 and Up.**

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
48-1	208	3500A15	T6-4027-509	rear spring assembly, 6-leaf	2	As Req'd
48-	----	-----	T6-4041-105	rear spring assembly, 4-leaf	2	"
48-2	—	-----	T6-4029-507	rear spring clamping plate	2	"
48-3	350	VBM-4008	T6-4027-523	rear bump stop	2	"
48-4	—	-----	3/8-16NC	locknut	2	"
48-5	—	-----	T6-2107-103	u-bolt, rear	2	"
48-6	—	-----	9/16-12NC	locknut	4	"
48-7	—	-----	9/16	flat washer	4	"
48-8	—	-----	1/2-13NCX3-1/2"	hex head bolt	4	"
48-9	—	-----	1/2	flat washer	4	"
48-10	—	-----	1/2-13NC	locknut	10	"
48-11	—	-----	1/2-13NCX4"	hex head bolt	4	"
48-12	76	EXP3-11	T6-4042-101	nylon bushing	4	"
48-13	—	-----	T6-4027-515	torque tube plate	2	"
48-14	—	-----	1/2-13NCX3"	hex head bolt	2	"
48-15	—	-----	T6-4027-517	torque tube	1	"
48-16	349	CM-12Z	T6-4027-519	heim joint	2	"
48-17	—	-----	3/4-16NF	jamb nut	2	"
48-18	—	-----	3/4-10NCX2-1/2"	hex head bolt	2	"
48-19	—	-----	3/4-10NC	locknut	2	"
48-20	—	-----	T6-2001-101SR	drive axle, rockwell	1	"
48-21	—	-----	T6-4027-501	transmission support, gasoline engine	1	"
	—	-----	T6-4227-501	transmission support, perkins diesel engine	1	"
	—	-----	T6-2009-209K	SOLID MOUNT KIT #22B	1	"

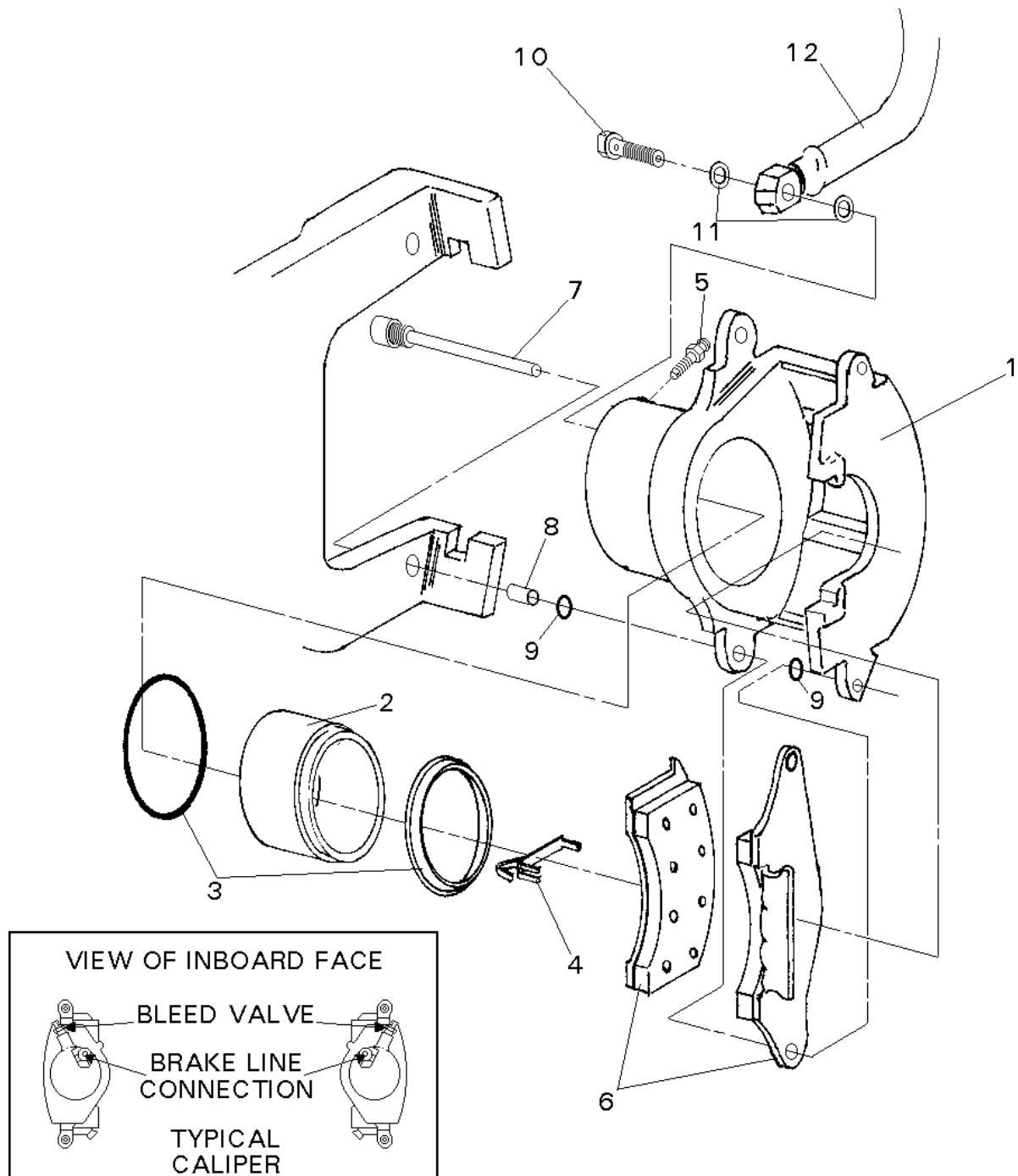


Figure 49: Rear Disc Brake Caliper Assembly



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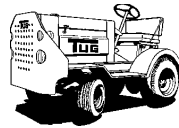


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
49-1	625	631063 L	T6-8013-144	caliper assembly, RH fwd or LH rear (notes 1,2)	2	2117 & Up
	127	R55109	T6-8013-103	caliper housing, RH fwd or LH rear (note 1)	2	128-2116
	-----	-----	T6-8013-103K	caliper assembly, RH fwd or LH rear (notes 1,2)	2	"
49-	625	631064 R	T6-8013-146	caliper assembly, LH fwd or RH rear (notes 1,2)	2	2117 & Up
	127	R55108	T6-8013-104	caliper housing, LH fwd or RH rear (note 1)	2	128-2116
	-----	-----	T6-8013-104K	caliper assembly, LH fwd or RH rear (notes 1,2)	2	"
49-	-----	-----	T6-8013-181	caliper assembly, LH rear	1	8507 & Up
49-	-----	-----	T6-8013-183	caliper assembly, RH rear	1	8507 & Up
49-2	9	180128880	T6-8013-157	piston	4	2117 & Up
	127	WA-0277-1	T6-8013-117	piston	4	128-2116
	22	85103	T6-8003-115	piston, dual piston calipers	8	001-127
49-3	22	524	T6-8013-153	piston seal and caliper boot kit	4	2117 & Up
	127	66851	T6-8013-115	piston seal and caliper boot kit	4	128-2116
	127	F59179	T6-8003-117	piston seal and caliper boot kit	4	001-127
49-4	22	82309	T6-8013-169	retainer, inboard brake pad	4	2117 & Up
	127	13105	T6-8003-107	brake pad retainer clip with bolt and lock washer	4	001-127
49-	127	H5411	T6-8013-113	clip, anti-rattle	4	128-2116
49-	-----	-----	T6-8013-131	Clip and Grommet Kit	1	"
49-5	22	22660	T6-8013-165	bleed valve	4	2117 & Up
	22	6858	T6-8013-109	bleed valve	4	128-2116
49-	22	77706	T6-8003-109	cross over line, dual piston caliper, RH fwd or LH aft (note 1)	2	001-127
49-	22	77705	T6-8003-110	cross over line, dual piston caliper, LH fwd or RH aft (note 1)	2	"
49-6	22	MAS-728A	T6-8013-149	brake pads kit, non-organic	2	2117 & Up

Note: original equipment rear disc brake calipers on units through serial number 127 are no longer available.

replacement of rear disc brake calipers on these units requires retrofitting to new configuration using disc brake change over kit t6-8013-501.

Note: Quantities given are for four-caliper rear disc brake systems. for two-caliper rear disc brake systems, actual quantities for calipers and associated equipment is half the indicated quantity.

1. Calipers are installed such that the bleed valve and brake line connection are inboard and the bleed valve points upward (see insert in FIGURE 49). On four-caliper rear disc brake systems, the forward, right hand caliper is interchangeable with the aft, left hand caliper and the forward, left hand caliper is inter-changeable with the aft, right hand caliper. On two-caliper rear disc brake systems, the two calipers are NOT interchangeable.

2. Complete caliper assembly includes caliper, piston, seal, boot and mounting bolt sleeves and bushings as applicable

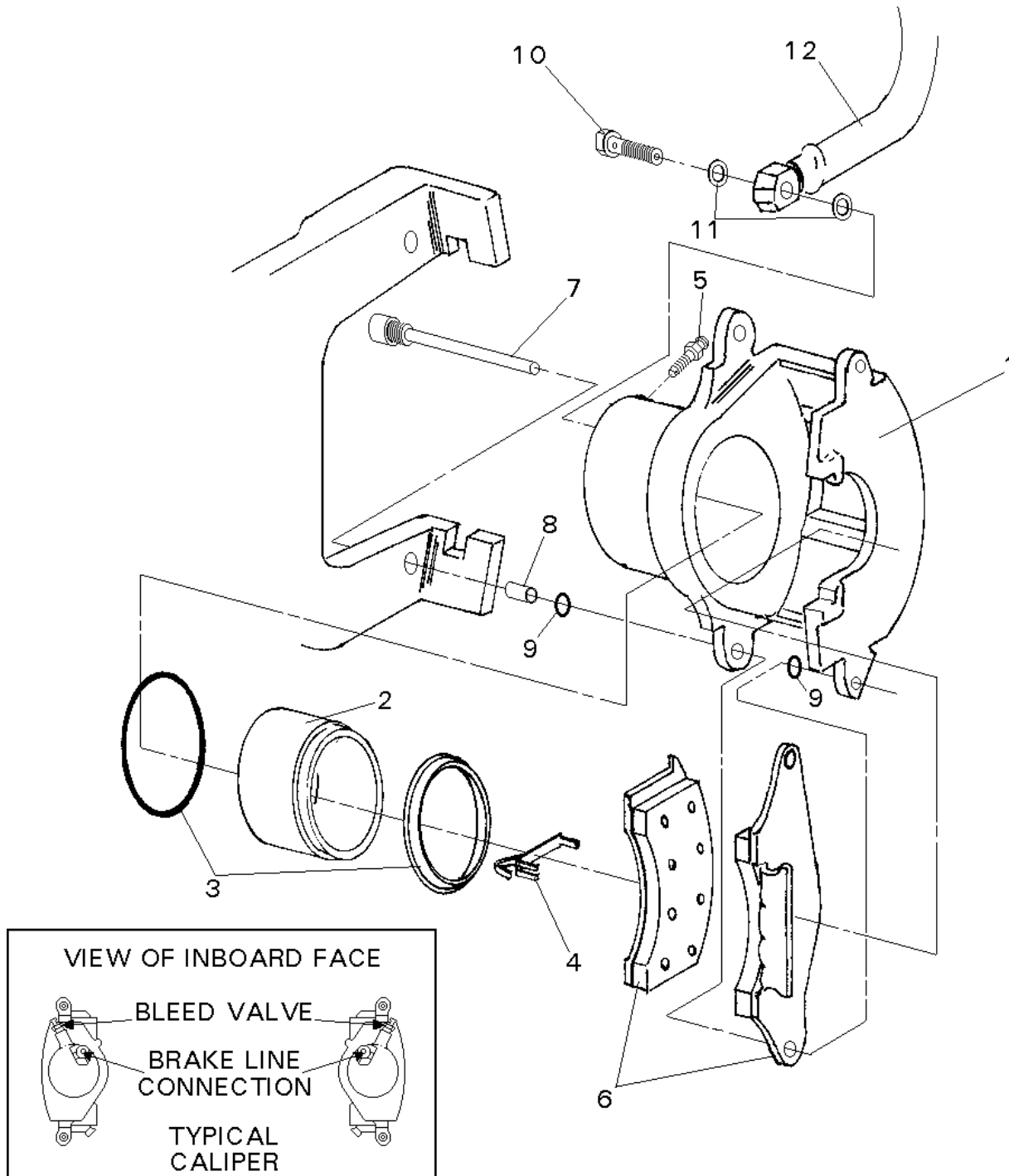
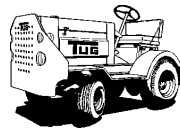
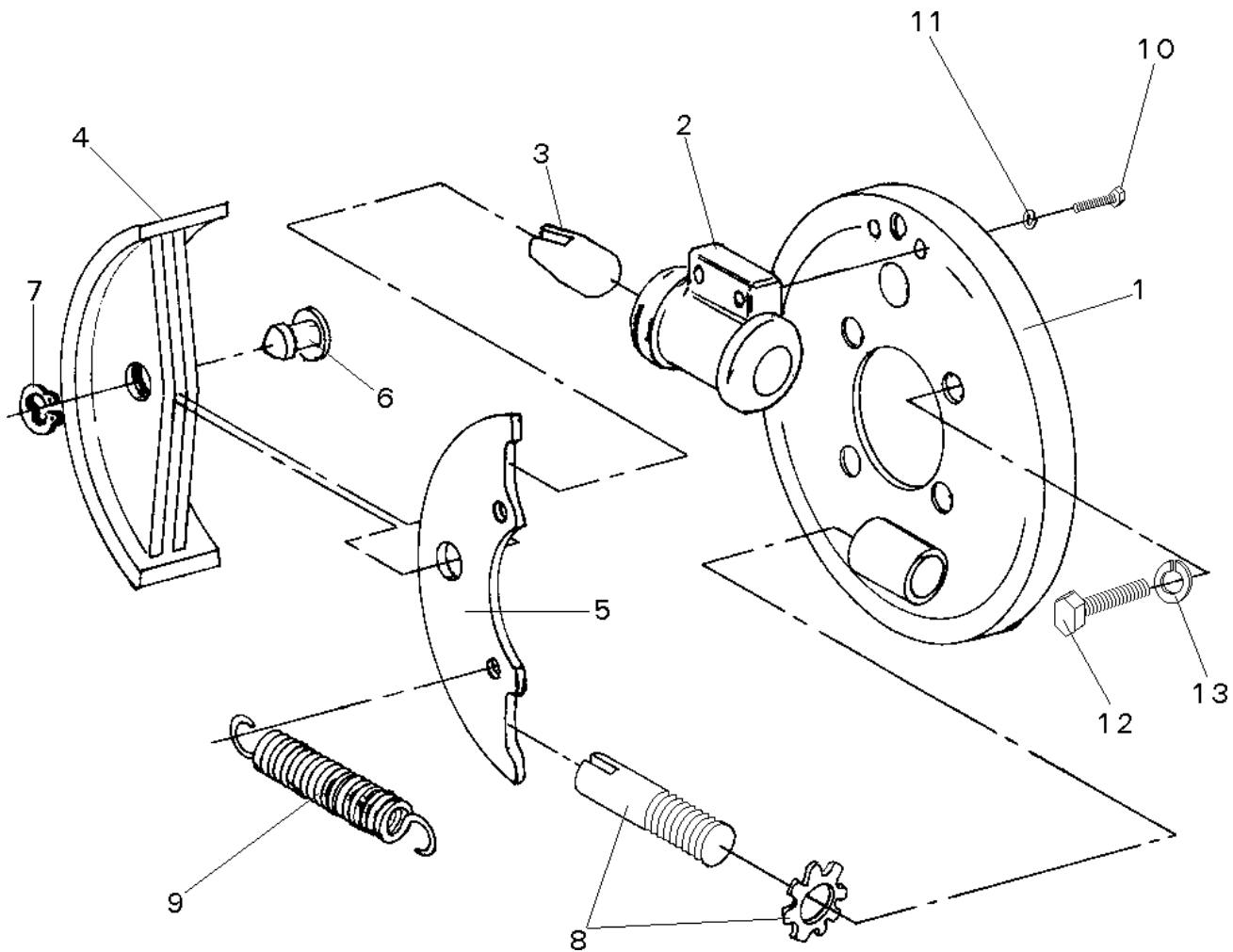
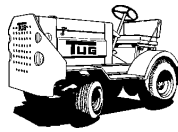


Figure 49: Rear Disk Brake Caliper Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
49-7	127	H5004-DP	T6-8013-159	bolt, housing retainer, without cotter pin hole	8	2117 & Up
	-----	-----	T6-8013-205	bolt, housing retainer, with cotter pin hole	8	"
	231	H-5005-2	T6-8013-107	bolt, housing retainer	8	128-2116
49-8	22	82342	T6-8013-167	sleeve, retainer bolt	8	2117 & Up
49-9	22	82302/82303	T6-8013-164	bushing kit, caliper support	1	"
49-	-----	-----	T6-8013-140	mounting bracket, caliper, LH fwd or RH rear (note 1)	2	2117-4019
	-----	-----	T6-8013-139	mounting bracket, caliper, RH fwd or LH rear (note 1)	2	2117-4019
	-----	-----	T6-8013-105	mounting bracket, caliper	4	128-2116
49-	369	NAS-1109-16D	T6-8013-171	bolt, NAS, caliper mounting bracket	8	2117-4019
	-----	-----	T6-8013-119	hex head bolt, caliper mounting bracket	8	128-2116
49-	-----	-----	9/16	flat washer, caliper mounting bracket	8	2117-4019
	-----	-----	1/2	flat washer, caliper mounting bracket	16	128-2116
49-	204	AN320-9	T6-8013-173	nut, aN, caliper mounting bracket	8	2117-4019
	-----	-----	T6-8013-121	locknut, caliper mounting bracket	8	128-2116
49-10	364	14094948	T6-8013-145	bolt, brake hose	4	2117 & Up
	227	C5551X4	T6-6011-159	elbow, 90°, caliper	4	128-2116
49-11	31	475660	T6-8013-147	washer, brake hose bolt	8	2117 & Up
49-12	92	253-57121-017	T6-8013-143	brake hose	4	"
	92	1040U10260408	T6-6011-155	brake hose	4	128-2116
49-	-----	-----	T6-8009-101	rotor, rockwell drive axle	2	001-4019
	171	A3218C1069	T6-2001-605	rotor, rockwell drive axle	2	4020 & Up
	193	070HU140-X	T6-2051-136	hub with rotor, dana drive axle (note 3)	2	001 & Up
49-	-----	-----	T6-8013-501	rear disc brake change over kit	1	001-127

Note: Quantities given are for four-caliper rear disc brake systems. for two-caliper rear disc brake systems, actual quantities for calipers and associated equipment is half the indicated quantity.

3. Two-piece hub and rotor assembly is no longer available. Existing two-piece hub and rotor assemblies should be replaced with single-piece hub and rotor T6-2051-136.



**Figure 50: Front Drum
Brake Assembly**

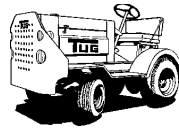
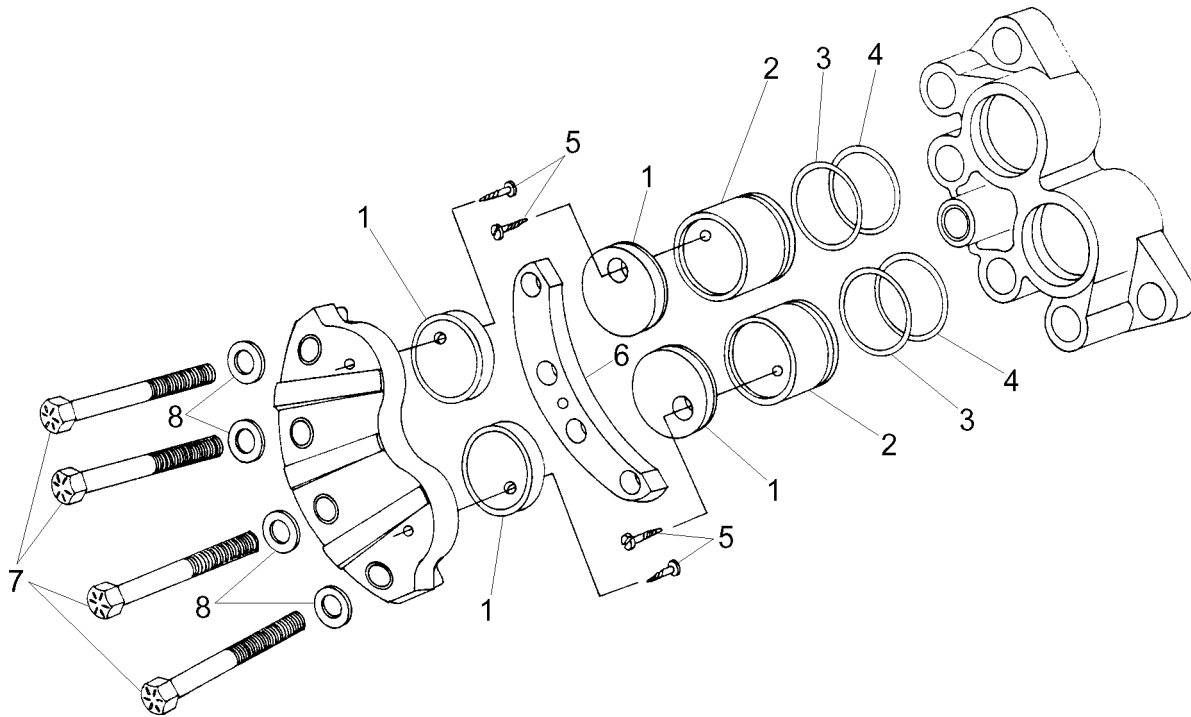
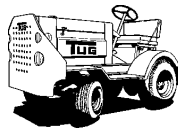


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
50-	375	390908031	T6-3002-101-14	brake, 8-1/2"x2-1/4"	1	As Req'd
50-1	60	16559	T6-3002-501	back plate assembly (includes bolts)	1	"
50-	375	390908030	T6-3002-101-13	brake drum	1	"
50-2	60	6817	T6-3002-505	wheel cylinder assembly	1	"
50-	60	16617	T6-3002-526	wheel cylinder repair kit	1	"
50-3	60	12365	T6-3002-508	push rod	2	"
50-4	60	12359	T6-3002-514	brake shoe with lining	2	"
50-5	60	16658	T6-3002-512	shoe lever	2	"
50-6	60	12560	T6-3002-515	anchor pin	2	"
50-7	60	7778	T6-3002-516	retaining ring	2	"
50-8	60	23320	T6-3002-518	adjusting screw assembly	2	"
50-9	60	8785	T6-3002-509	spring, brake shoe lever	2	"
50-10	—	-----	1/4-20NCX1-1/2"	hex head bolt	2	"
50-11	—	-----	1/4	lock washer	2	"
50-12	60	8798	T6-3002-502	hex head bolt (included with back plate)	4	"
50-13	—	-----	7/16	lock washer	4	"
50-	60	9958	T6-3002-103	bolt, brake line	2	"
50-	60	9959	T6-3002-105	connector, brake line	2	"
50-	60	7761	T6-3002-107	washer, brake line	4	"



**Figure 50A: Optional Front Disk Brakes
Assembly**

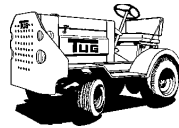
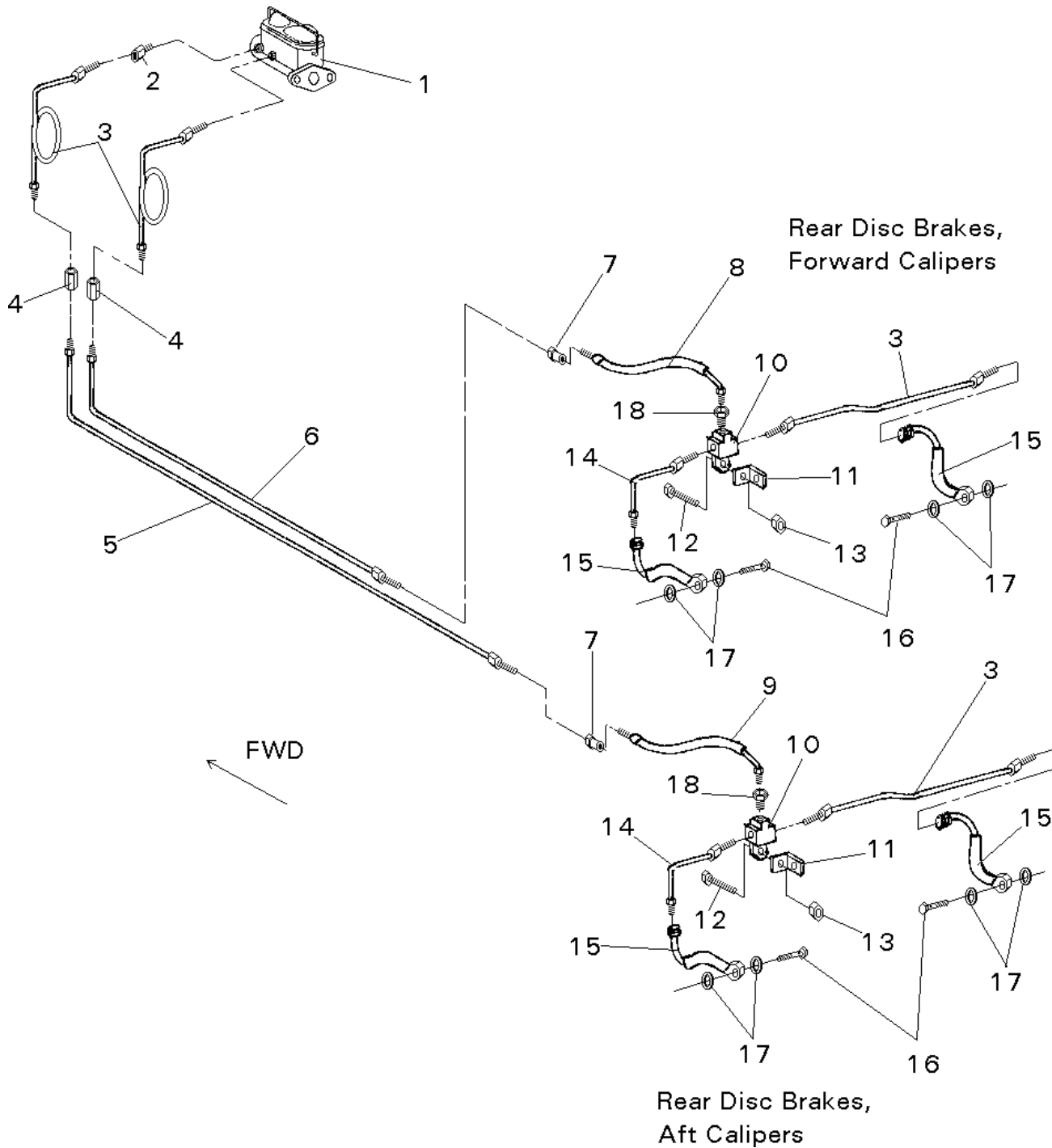
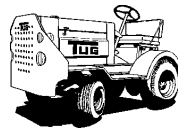


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
50a-	-----	0733-0234	T6-3002-102-6	caliper assembly, complete *	2	As Req'd
50a-1	-----	0720-1024	T6-3002-102-7	brake pad	2	"
50a-2	-----	0720-1027	T6-3002-102-8	piston	2	"
50a-3	-----	0760-1009	T6-3002-102-9	piston (outer) seal	2	"
50a-4	-----	0733-1227	T6-3002-102-10	cylinder (inner) seal	2	"
50a-5	-----	0720-1026	T6-3002-102-11	pad retaining screw	4	"
50a-6	-----	0733-1023	T6-3002-102-12	spacer	2	"
50a-7	-----	0724-1106	T6-3002-102-14	caliper bolt	4	"
50a-8	-----	0720-1011	T6-3002-102-15	caliper bolt washer	4	"

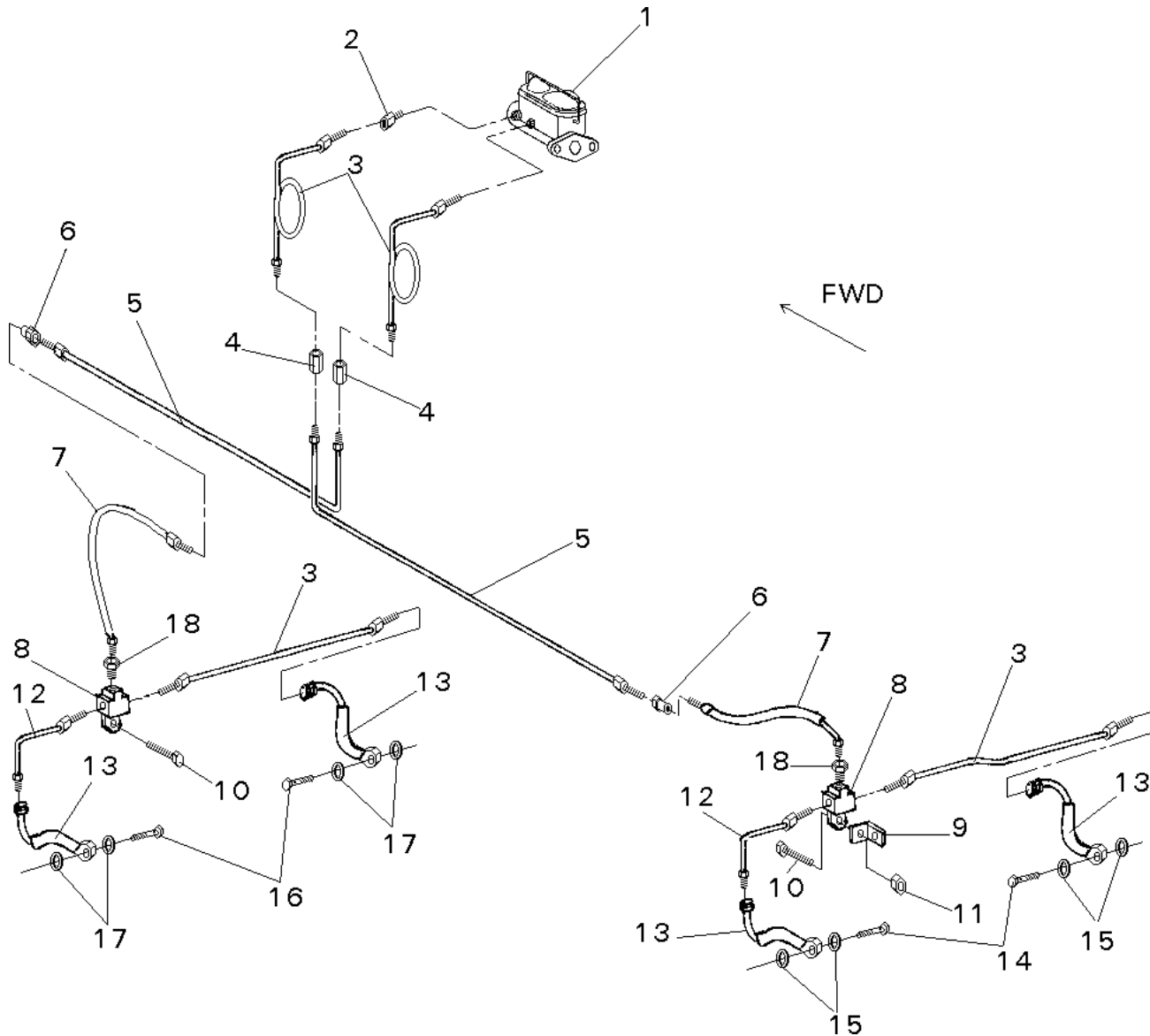
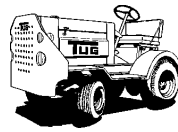
* Note: Quantities indicated are per wheel: Two caliper assemblies per wheel; four total on front wheel disc brake tractor. See Figure 49 for rear calipers.



**Figure 51: Brake System
Assembly -Rear Brakes only**

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
51-1	—	-----	T6-6001-113	Master Cylinder, dual, Rear disc brakes only (note 1)	1	128 & Up
	127	F36706	MD-CB1-121	master cylinder, single	1	001-127
51-2	92	7911	T6-600-112	adapter, master cylinder forward port	1	128 & Up
	92	7910	T6-6011-127	adapter, master cylinder forward port	1	001-127
	92	7909	T6-6001-129	adapter, master cylinder aft port	1	"
51-3	92	S320	T6-6011-141	BRAKE LINE, 20-INCH	4	001 & Up
51-4	92	302X3	T6-8011-121	brake line connector	2	"
51-5	92	S340	T6-6011-149	brake line, 40-inch	1	"
51-6	92	S330	T6-6011-161	brake line, 30-inch	1	"
51-7	92	252X3	T6-6011-153	connector, brake line flex hose	2	"
51-8	227	FA210169020404	T6-6016-103	brake hose, 14-inch, rear disc brakes, forward calipers	1	"
51-9	227	FA210128020404	T6-6016-105	brake hose, 14-inch, rear disc brakes, aft calipers	1	"
51-10	92	7812	T6-6011-111	tee, brake line	2	"
51-11	—	-----	T6-6011-113	support, brake line tee	2	"
51-12	—	-----	1/4-20NCX1"	hex head bolt	2	"
51-13	—	-----	1/4-20NC	locknut	2	"
51-14	92	S306	T6-6011-151	brake line, 6-inch	2	128 & Up
51-15	92	253-57121-017	T6-8013-143	brake hose	4	2117 & Up
	92	1040U10260408	T6-6011-155	brake hose	4	128-2116
51-16	364	14094948	T6-8013-145	bolt, brake hose	4	2117 & Up
	227	C5551X4	T6-6011-159	elbow, 90°, caliper	4	128-2116
51-17	31	475660	T6-8013-147	washer, brake hose bolt	8	2117 & Up
51-18	92	7828	T6-600-110	ADAPTOR, BRAKE LINE	2	001 & Up
51-	HE	88684	-----	p-clamp, plastic	Ref.	"
51-	HE	86080	-----	p-clamp, metal	Ref.	"

1. Brake booster provided as original equipment on tractors prior to serial number 362 is no longer available. Replacement of this booster requires replacement of single master cylinder MD-CB1-121 with dual master cylinder T6-6001-113. See brake pedal, booster and master cylinder assembly.



**Figure 52: Brake System Assembly,
Front Drum and Rear Disc Brakes**

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
52-1	383	1779	T6-6001-113CV	Master Cylinder, dual, front and rear brakes	1	2117 & Up
52-2	92	7911	T6-600-112	adapter, master cylinder forward port	1	"
52-3	92	S320	T6-6011-141	Brake Line, 20 inch	4	"
52-4	92	302X3	T6-8011-121	brake line connector	2	"
52-5	92	S330	T6-6011-161	brake line, 30-inch	2	"
52-6	92	252X3	T6-6011-153	connector, brake line flex hose	2	"
52-7	227	FA210169020404	T6-6016-103	brake hose, 14-inch	2	"
52-8	92	7812	T6-6011-111	tee, brake line	2	"
52-9	—	-----	T6-6011-113	support, brake line tee	1	"
52-10	—	-----	1/4-20NCX1"	hex head bolt	2	"
52-11	—	-----	1/4-20NC	locknut	1	"
52-12	92	S306	T6-6011-151	brake line, 6-inch	2	"
52-13	92	253-57121-017	T6-8013-143	brake hose	4	"
52-14	364	14094948	T6-8013-145	bolt, brake hose, rear disc brakes	2	"
52-15	31	475660	T6-8013-147	washer, brake hose bolt, rear disc brakes	4	"
52-16	60	9958	T6-3002-103	bolt, brake hose, front drum brakes	2	"
52-17	60	7761	T6-3002-107	washer, brake hose bolt, front drum brakes	4	"
52-18	92	7828	T6-600-110	Adaptor, Brake Line	2	"
52-	60	9959	T6-3002-105	connector, brake line to front drum brakes	2	"
52-	HE	88684	-----	p-clamp, plastic	Ref.	"
52-	HE	86080	-----	p-clamp, metal	Ref.	"

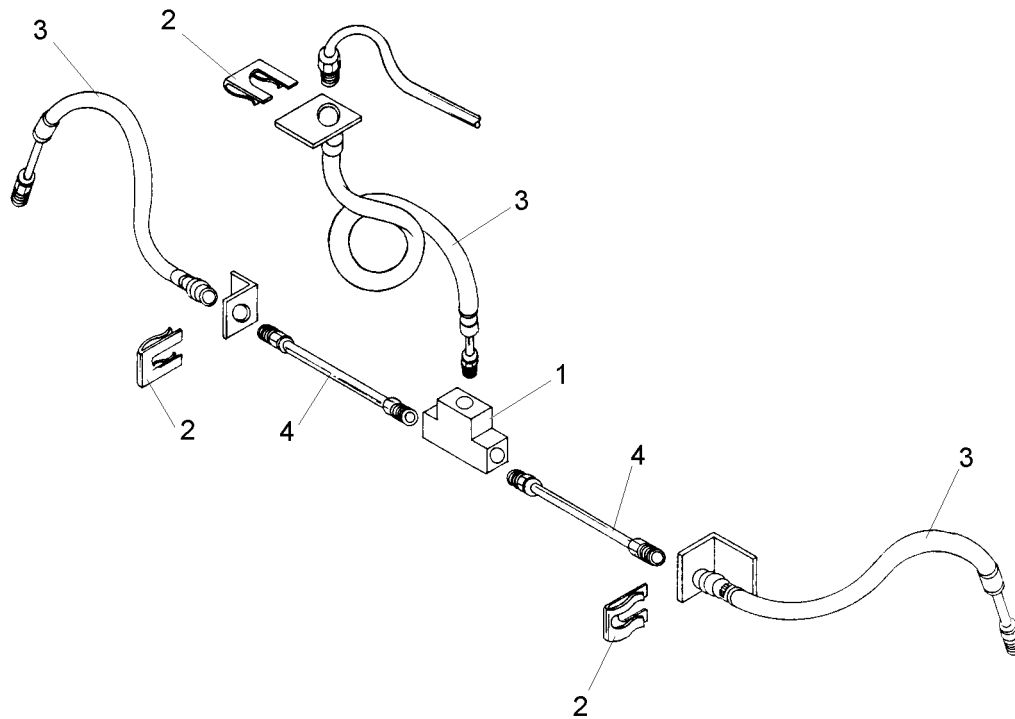
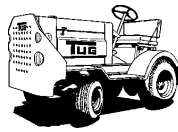


Figure 52A: Brake Line Assembly.
Front Disc Brake Option

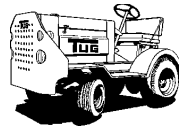
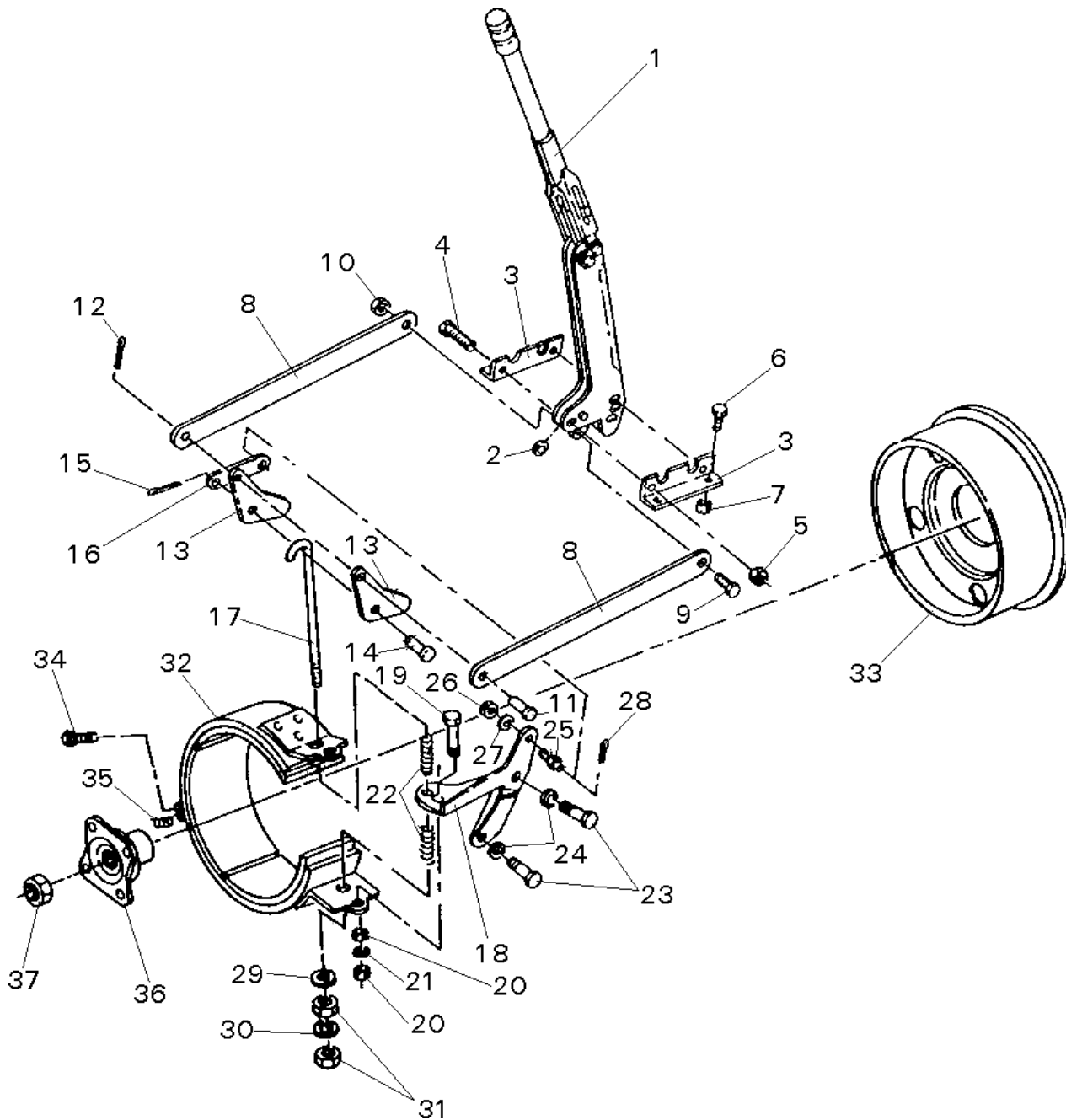
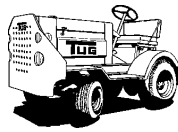


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
52a-1	227	7812	T6-6011-111	Tee	1	As Req'd
52a-2	364	22555667	MD-CB21-121	Clip	2	"
52a-3	266	2HBH19-3MIX-1.75-3FI	MH-ND-543	Brake Hose	3	"
52a-4	227	S306	T6-6011-151	Brake Line, 6"	2	"



**Figure 53: Park Brake Assembly,
Serial Numbers 001 Through 361**

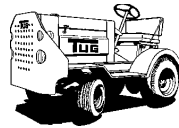


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
53-1	152	0218-2900	T6-8005-101	PARK BRAKE LEVER	1	001 & Up
53-2	—	-----	T6-8005-103	spacer, park brake lever	1	"
53-3	—	-----	T6-8005-105	mounting bracket, park brake	2	001-361
53-4	—	-----	3/8-16NCX1-1/2"	hex head bolt	2	"
53-5	—	-----	3/8-16NC	locknut	2	"
53-6	—	-----	1/4-20NCX1"	hex head bolt	4	"
53-7	—	-----	1/4-20NC	locknut	4	"
53-8	—	-----	T6-8005-107	strap, park brake, 13" (Discontinued)	2	001-079
	—	-----	T6-8005-109	strap, park brake, 10"	2	080-361
53-9	—	-----	5/16-18NCX1"	hex head bolt	1	001-362
53-10	—	-----	5/16-18NC	locknut	1	"
53-11	79	87443	T6-500-123	clevis pin	1	"
53-12	—	-----	1/8X1"	cotter pin	1	"
53-13	—	-----	T6-8002-107	cam, park brake	2	"
53-14	256	OIT-73928-S	T6-8002-117	retaining pin, cam	1	"
53-15	256	OIT-72035-S	T6-8002-119	cotter pin	1	"
53-16	256	OIT-2630	T6-8002-105	strap, brake stabilizer	1	"
53-17	256	OIT-2642	T6-8002-131	rod, brake band adjusting	1	"
53-18	256	D2TZ-2654B	T6-8002-121	bracket, park brake mounting, FMX transmission	1	"

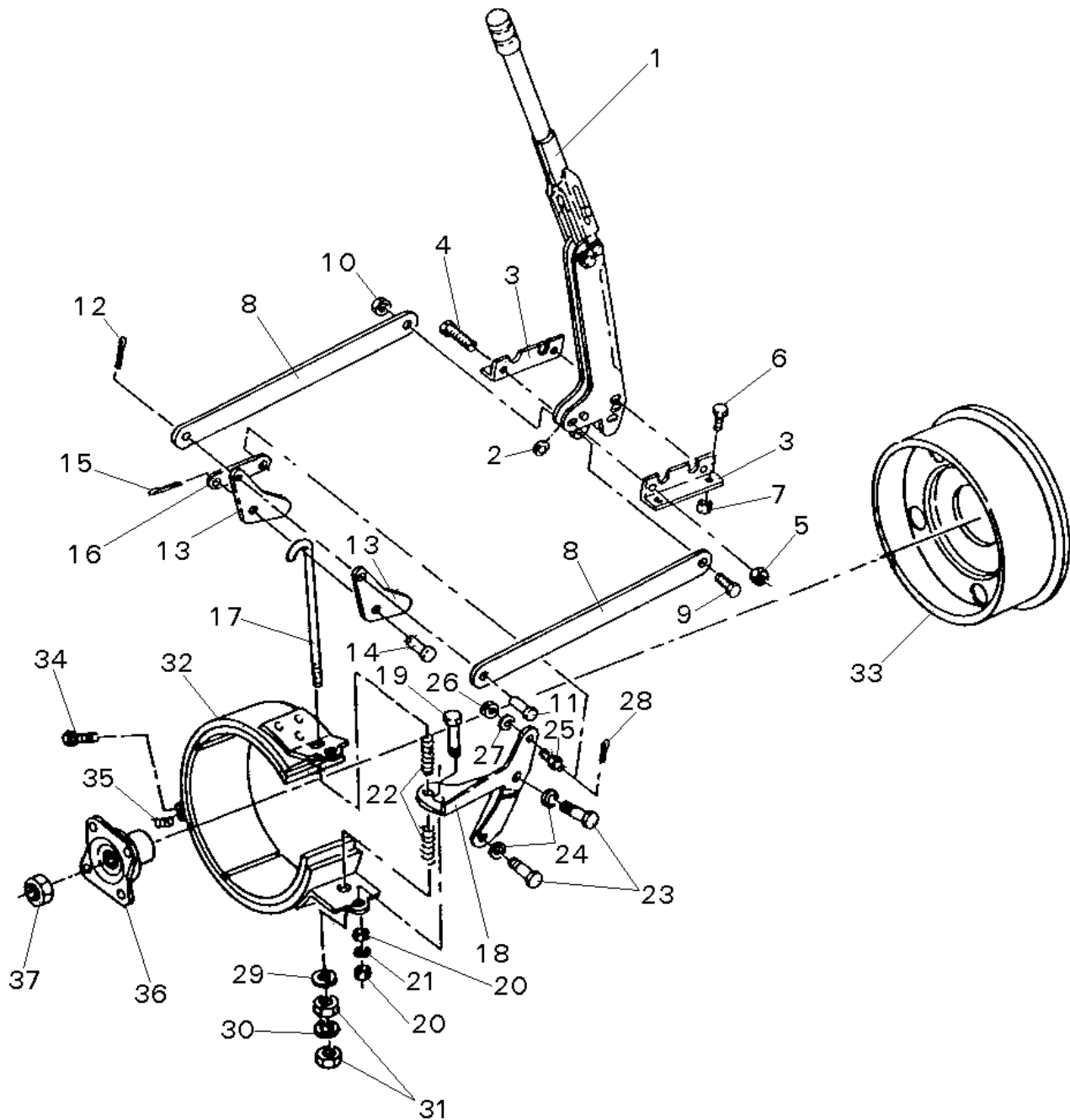
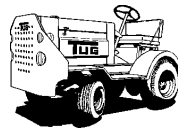
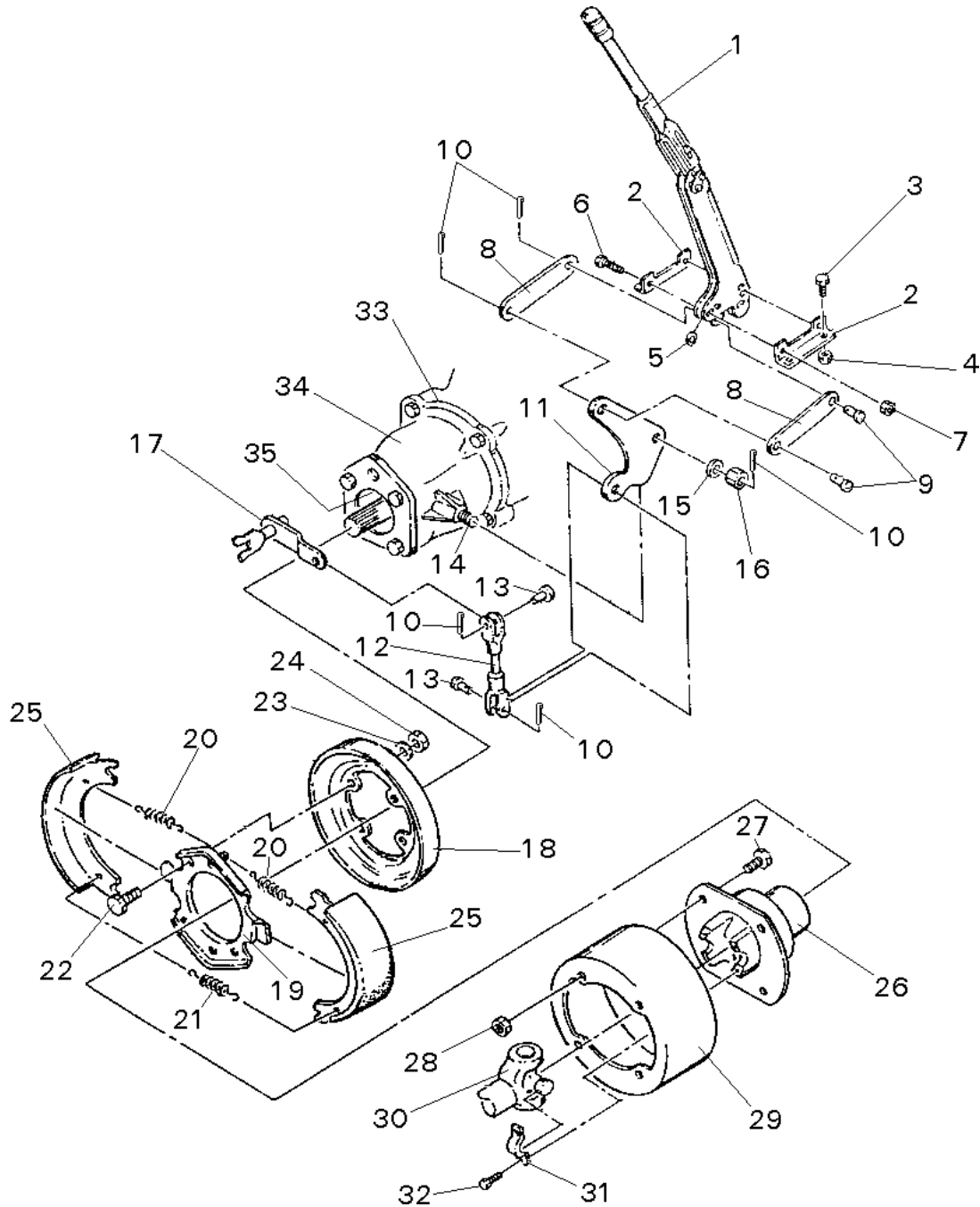
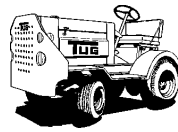


Figure 53: Park Brake Assembly.
Serial Numbers 001 Through 361

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
53-19	256	OIT-31225-S	T6-8002-123	adjusting bolt	1	"
53-20	256	OIT-33795-S(M-49)	T6-8002-125	nut, adjusting bolt	2	"
53-21	256	OIT-34805-S(X-62)	T6-8002-127	lock washer, adjusting bolt	1	"
53-22	256	OIT-2634	T6-8002-129	spring, brake release	2	"
53-23	—	-----	3/8-16NCX1"	hex head bolt	2	"
53-24	—	-----	3/8	lock washer	2	"
53-25	256	OIT-2837	T6-8002-109	bolt, stabilizer strap	1	"
53-26	256	OIT-3407-S	T6-8002-111	nut, stabilizer strap	1	"
53-27	256	OIT-72035-S	T6-8002-113	lock washer, stabilizer	1	"
53-28	—	-----	T6-8002-115	cotter pin	1	"
53-29	256	OIT-44730-S(X-26)	T6-8002-133	flat washer	1	"
53-30	256	OIT-34808-S(X-67)	T6-8002-137	lock washer	1	"
53-31	256	OIT-34670-S(X54)	T6-8002-135	nut	2	001-361
53-32	256	B7T-2648B	T6-8002-139	band, park brake, fMX transmission	1	"
53-33	256	OIT-2614	T6-8002-103	drum, park brake, fMX trans. (discontinued)	1	"
53-34	256	OIT-2616	T6-8002-141	bolt, band retainer	1	"
53-35	256	OIT-2640	T6-8002-143	spring, band retainer	1	"
53-36	256	OIT-7089	T6-8002-145	flange, transmission output, fMX transmission	1	"
53-37	256	371887-S	T6-8002-147	nut, transmission output flange, fMX transmission	1	"



**Figure 54: Park Brake Assembly, Floorboard Mounted,
Serial Numbers 362 and Up**

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
54-1	152	O218-2900	T6-8005-101	park brake lever	1	001 & Up
54-2	—	-----	T6-8005-105	mounting bracket, park brake	2	Note 1
54-3	—	-----	1/4-20NCX1-1/4"	hex head bolt	4	"
54-4	—	-----	1/4-20NC	locknut	4	"
54-5	—	-----	T6-8005-103	spacer, park brake lever	1	001 & Up
54-6	—	-----	3/8-16NCX1-1/2	hex head bolt	2	Note 1
54-7	—	-----	3/8-16NC	locknut	2	"
54-8	—	-----	T6-8005-111	strap, park brake, gasoline engine	2	362 & Up
		-----	T6-8205-103	strap, park brake, perkins and cummins/onan diesel	2	362-2236
		-----	T6-7200-065	strap, park brake, Hercules diesel engine	2	As Req'd
54-9	79	87443	T6-500-123	clevis pin	2	362 & Up
54-10	—	-----	1/8X1-1/4"	cotter pin	5	"
54-11	256	D3TZ-2A663D	T6-8005-113	bell crank	1	Note 1
54-12	404	D3TZ-2857A	MD-CB21-113	clevis	1	362 & Up
54-13	79	87442	MD-CB21-115	clevis pin	2	"
54-14	256	385554S2	T6-8005-115	stud	1	"
54-15	256	44880S2	T6-8005-117	washer	1	"
54-16	256	386034S100	T6-8005-119	nut	1	"
54-17	256	B9TZ-2A710D	T6-8005-125	cam shaft	1	"
54-18	256	D6TZ-2A703A	T6-8005-153	shield, brake drum	1	"
54-19	256	B9TZ-2A636A	T6-8005-135	plate	1	"
54-20	256	B9T-2634B	T6-8005-147	spring	2	"
54-21	256	B9T-2749A	T6-8005-149	spring	1	"
54-22	256	58675-S2	T6-8005-131	hex head bolt	4	"
54-23	256	34794-S2	T6-8005-137	lock washer	4	"
54-24	256	380952-S2	T6-8005-133	nut	4	"
54-25	22	B4088	T6-8005-143	brake lining assembly	2	"
54-26	256	D3TZ-7089B	T6-8005-139	flange	1	"
54-27	256	385524-S2	-----	stud	4	"
54-28	—	-----	1/2-13NC	locknut	4	"
54-29	256	D3TZ-2614A	T6-8005-141	drum, 9"x3"	1	362 & Up
54-30	—	-----	T6-2006-101	drive shaft assembly	1	"
54-31	256	C6TZ-4A254B	T6-2006-105	saddle, drive shaft	2	"
54-32	256	382884S	T6-2006-103	bolt, drive shaft saddle	4	"
54-33	—	C6A2-7086-A	-----	Gasket	1	"
54-34	—	Dotz-7a0398	-----	Tail Shaft, C6	1	"
54-35	—	371887-52	T6-8002-147	1" Locknut	1	"
54-	—	-----	T6-8005-151	Park Brake Kit	1	As Req'd

1. Used on all tractors bearing serial numbers 362 through 2236 and all tractors equipped with gasoline engines from serial number 2237.

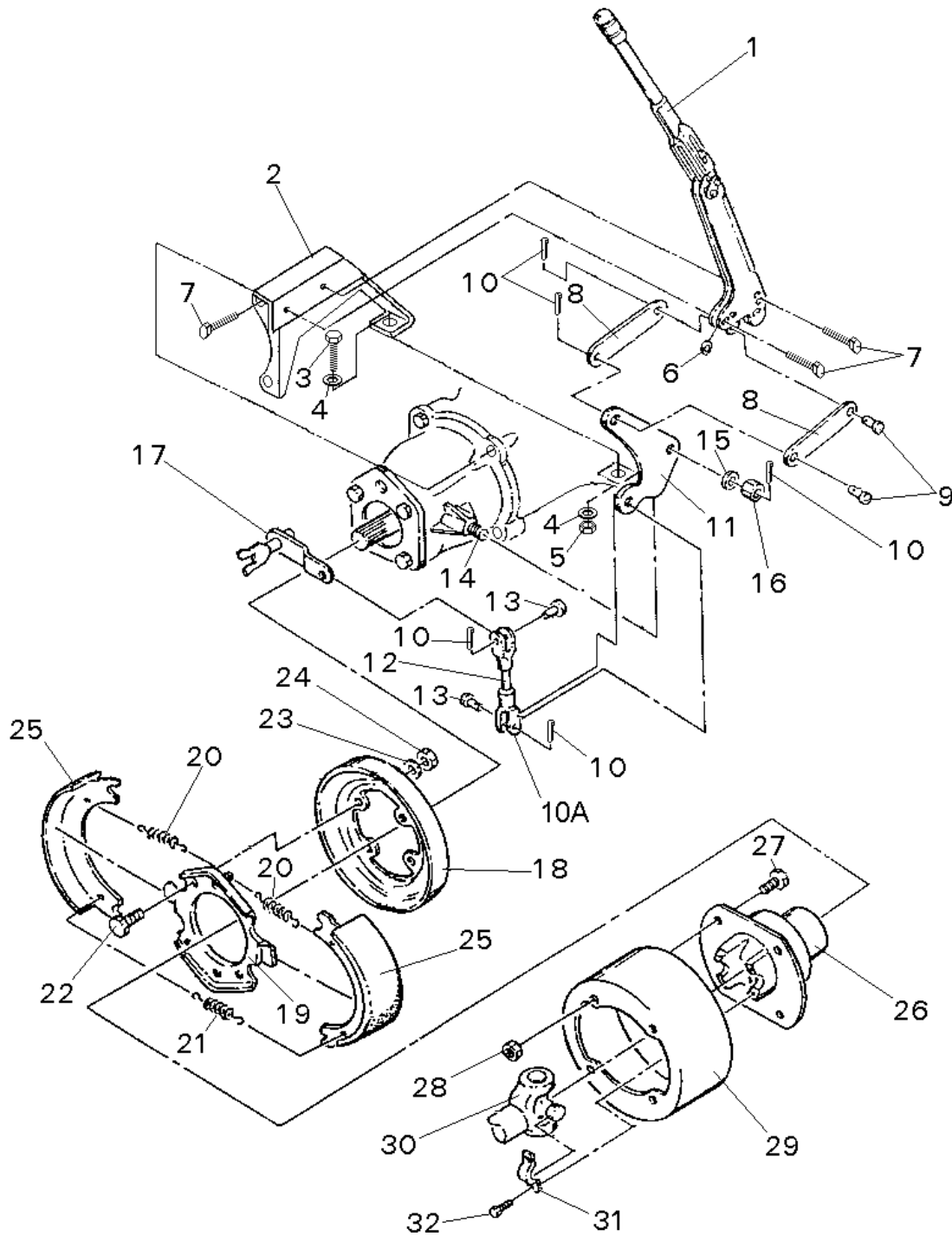
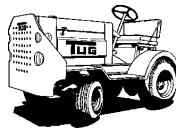
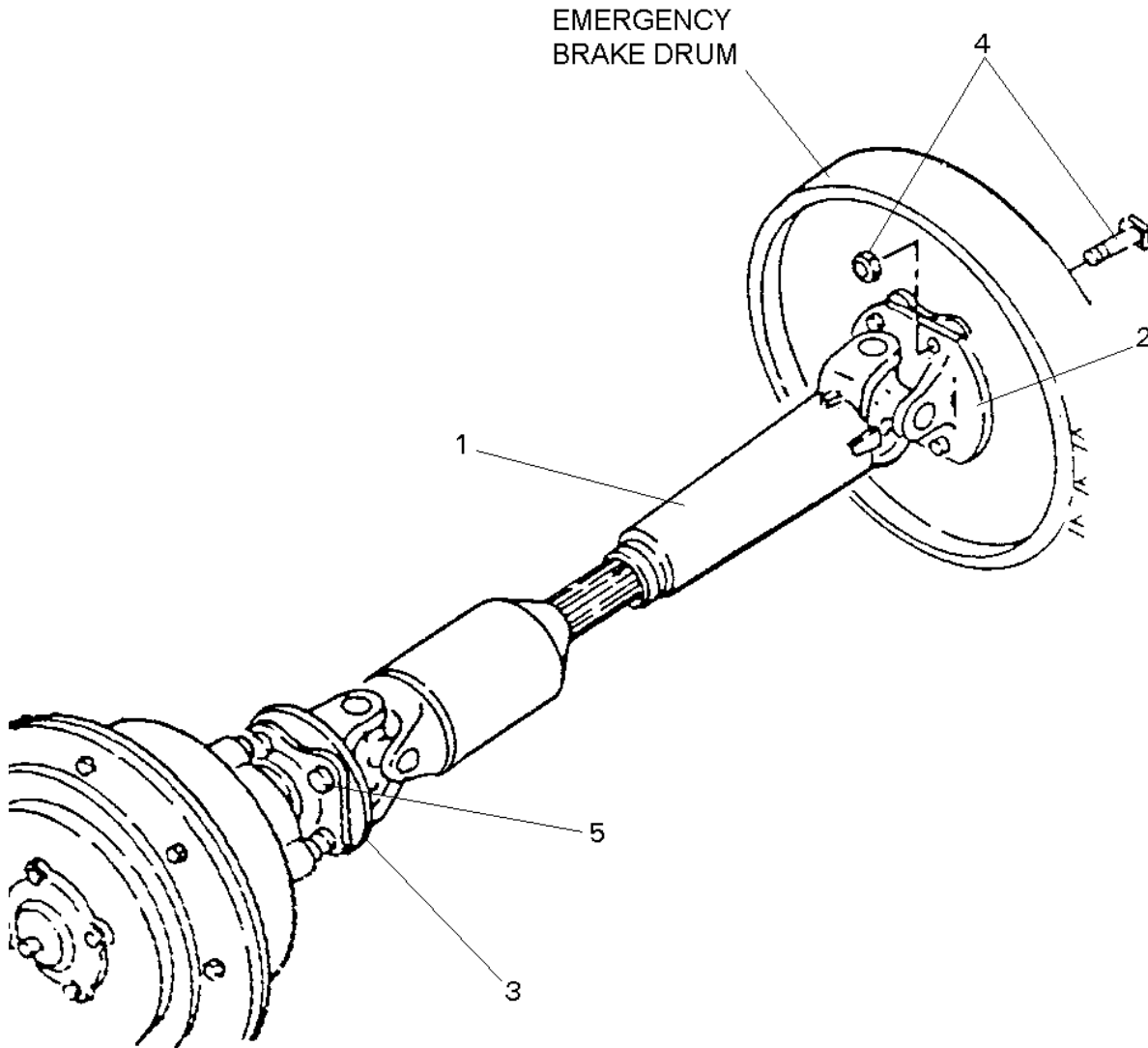
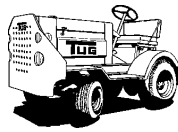


Figure 55: Park Brake Assembly, Transmission Mounted, Serial Numbers 2237 and Up

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
55-1	152	O218-2900	T6-8005-101	park brake lever	1	001 & Up
55-2	—	-----	T6-8205-111	mounting bracket, park brake	1	Note 1
55-3	—	-----	7/16-14NCX1-3/4"	hex head bolt	1	"
55-4	—	-----	7/16	flat washer	2	"
55-5	—	-----	7/16-14NC	locknut	1	"
55-6	—	-----	T6-8005-103	spacer, park brake lever	1	001 & Up
55-7	—	-----	3/8-16NCX1-1/2"	hex head bolt	4	Note 1
55-8	—	-----	T6-8005-111	strap, park brake, gasoline engine	2	362 & Up
55-9	79	87443	T6-500-123	clevis pin	2	362 & Up
55-10	—	-----	1/8X1-1/4"	cotter pin	5	"
55-10a	-----	-----	T6-8005-121	yoke	1	"
55-11	—	-----	T6-8205-107	bell crank	1	Note 1
55-12	404	D3TZ-2857A	MD-CB21-113	clevis	1	362 & Up
55-13	79	87442	MD-CB21-115	clevis pin	2	"
55-14	256	385554S2	T6-8005-115	stud	1	"
55-15	256	TPG-44880-52	-----	washer	1	"
55-16	256	TPG-386034-5100	-----	nut	1	"
55-17	256	TAG-B9TZA710D	-----	cam shaft	1	"
55-18	256	D6TZ-2A703A	T6-8005-153	shield, brake drum	1	"
55-19	256	B9TZ-2A636A	T6-8005-135	plate	1	"
55-20	256	B9T-2634B	T6-8005-147	spring	2	"
55-21	256	B9T-2749A	T6-8005-149	spring	1	"
55-22	256	58675-S2	T6-8005-131	hex head bolt	4	"
55-23	256	34794-S2	T6-8005-137	lock washer	4	"
55-24	256	380952-S2	T6-8005-133	nut	4	"
55-25	22	B4088	T6-8005-143	brake lining assembly	1	"
55-26	256	D3TZ-7089B	T6-8005-139	flange	1	"
55-27	256	385524-S2	-----	stud	4	"
55-28	—	-----	1/2-13NC	locknut	4	"
55-29	256	D3TZ-2614A	T6-8005-141	drum, 9"x3"	1	362 & Up
55-30	—	-----	T6-2006-101	drive shaft assembly	1	"
55-31	256	C6TZ-4A254B	T6-2006-105	saddle, drive shaft	2	"
55-32	256	382884S	T6-2006-103	bolt, drive shaft saddle	4	"
55-	259	BZE6-2RN2	42-100-801	SWITCH, PARK BRAKE LIGHT	1	As Req'd
55-	—	-----	T6-7010-213	bracket, park brake light switch	1	"

1. Used on all tractors equipped with Perkins diesel engines from serial number 2237.



**Figure 56: Drive Shaft Assembly, FMX Transmission,
Serial Numbers 001 through 361**

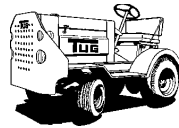
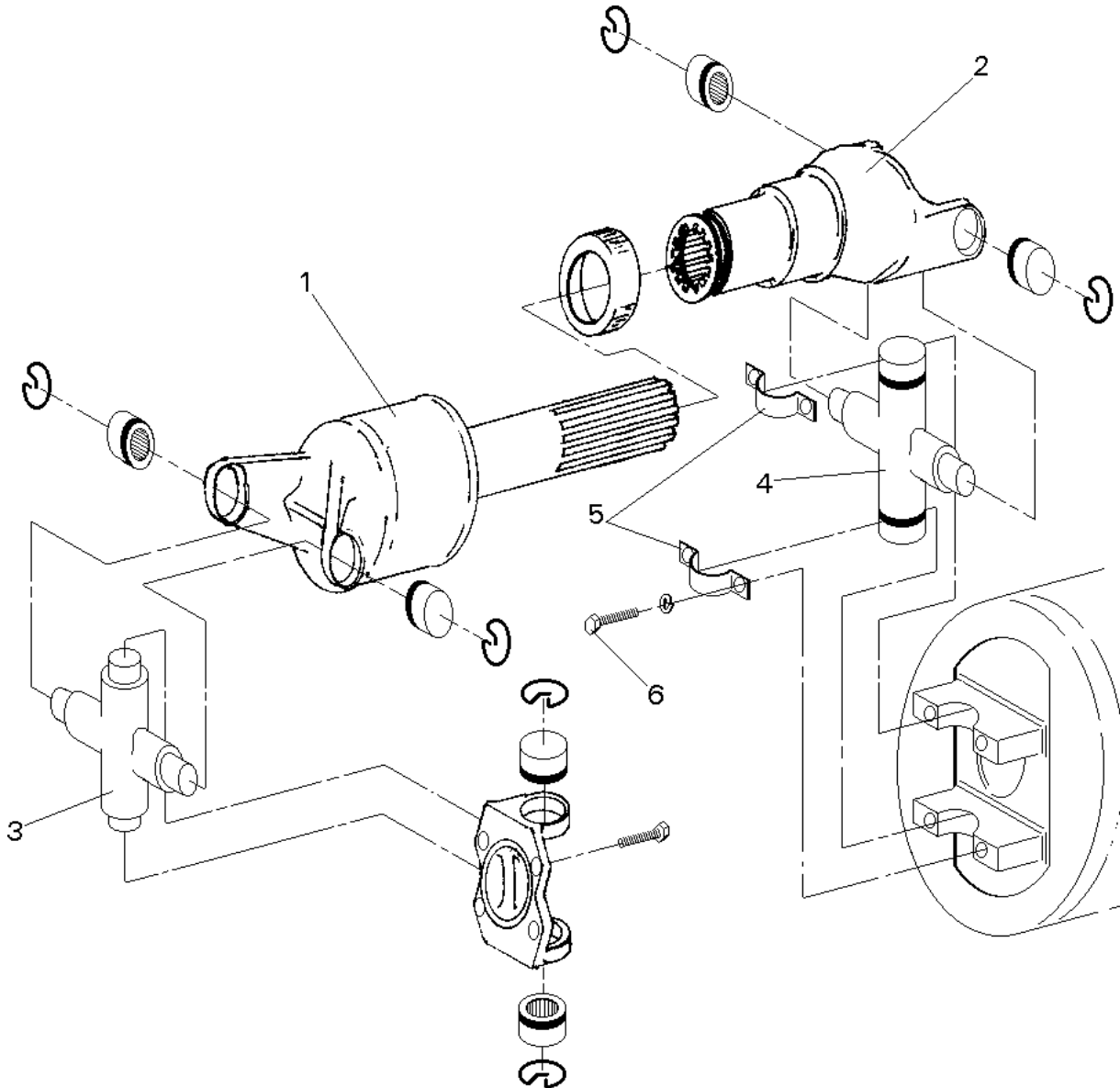
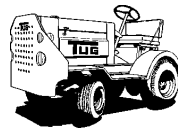


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
56-1	—	-----	T6-2002-111	drive shaft assembly	1	001-084
	—	-----	T6-2002-101	drive shaft assembly	1	085-361
56-2	—	-----	T6-2002-113	flange, front end	1	001-084
	—	-----	T6-2002-103	flange, front end	1	085-361
56-3	—	-----	T6-2006-111	flange yoke end	1	001 & Up
56-4	—	-----	T6-2002-109	bolt & Locknuts	4	085-361
56-5	256	TPG382884-S2	T6-2006-103	hex head bolt, spicer	4	001 & Up
56-	—	-----	3/8-24NF	locknut	4	"
56-	127	20058	T6-2006-107	universal joint kit, front (note 1)	1	001-361
56-	127	20026	T6-2002-107	universal joint kit, rear (note 1)	1	001 & Up

1. Universal joint kits T6-2006-109 and T6-2002-107 include spider, seals, snap rings, bearings and grease fitting.



**Figure 57: Drive Shaft Assembly, C-6
Transmission, Serial Numbers 362 and Up**

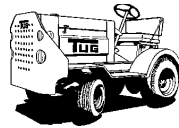
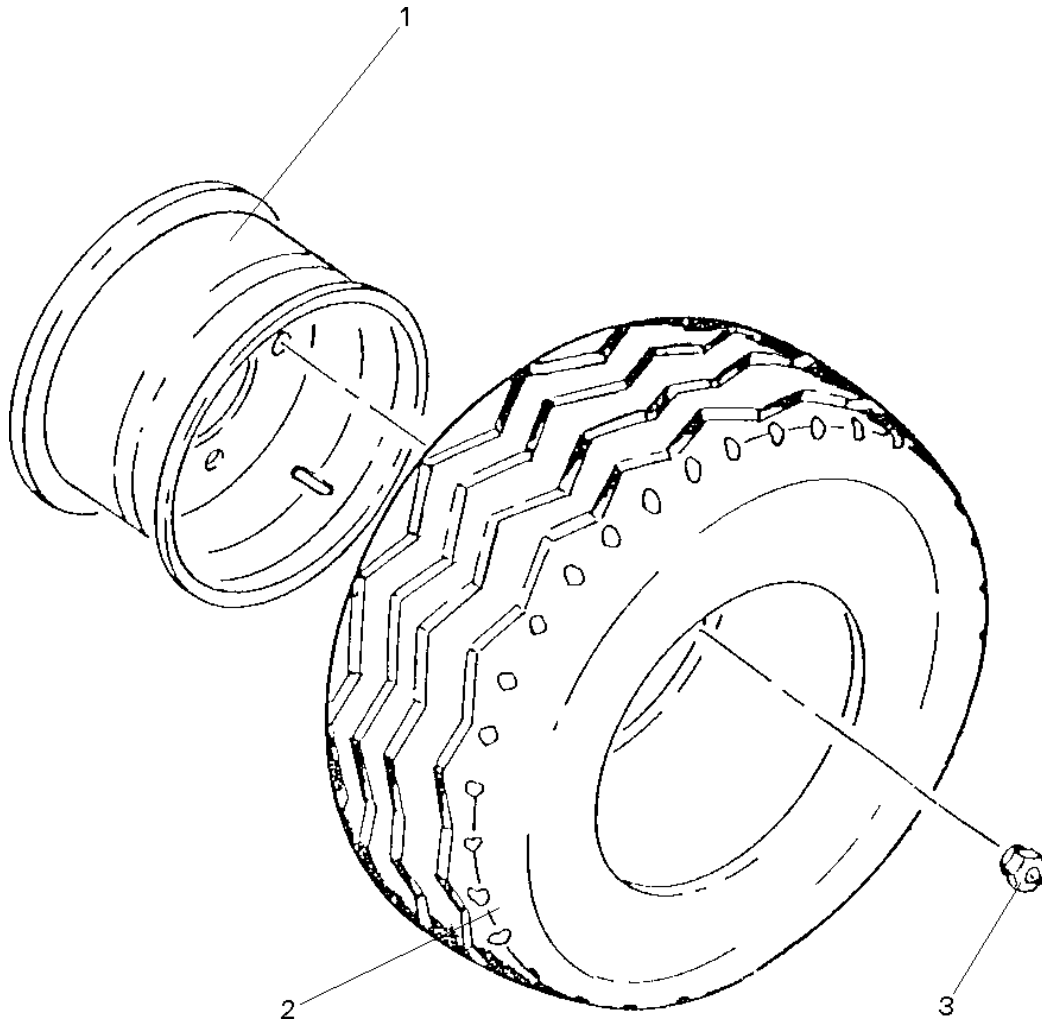
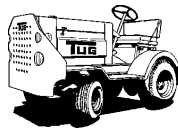


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
57-	—	-----	T6-2006-101	drive shaft assembly	1	Note 1
	—	-----	T6-7200-090	drive shaft assembly (Note 3)	1	Note 2
57-1	14	2401041	T6-2006-113	slip stub (Note 3)	1	"
57-2	14	33788KX	T6-2006-115	slip yoke	1	"
57-3	127	20026	T6-2002-107	universal joint kit, rear (note 4)	1	001 & Up
57-4	127	20049	T6-2006-107	universal joint kit, front (note 4)	1	362 & Up
57-5	256	C6TZ-4A254B	T6-2006-105	saddle, drive shaft	2	"
57-6	256	382884S	T6-2006-103	bolt, drive shaft saddle	4	"

1. Used on all units from serial number 362 except units equipped with Hercules diesel engines.
2. Used on units equipped with Hercules diesel engines.
3. Slip stub T6-2006-113 (item 1) is not used with drive shaft assembly T6-7022-090.
4. Universal joint kits T6-2002-107 (item 3) and T6-2006-107 (item 4) include spider, seals, snap rings, bearings and grease fitting.



**Figure 58: Wheel and Tire
Assembly, Front**

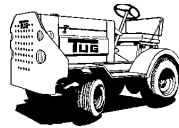
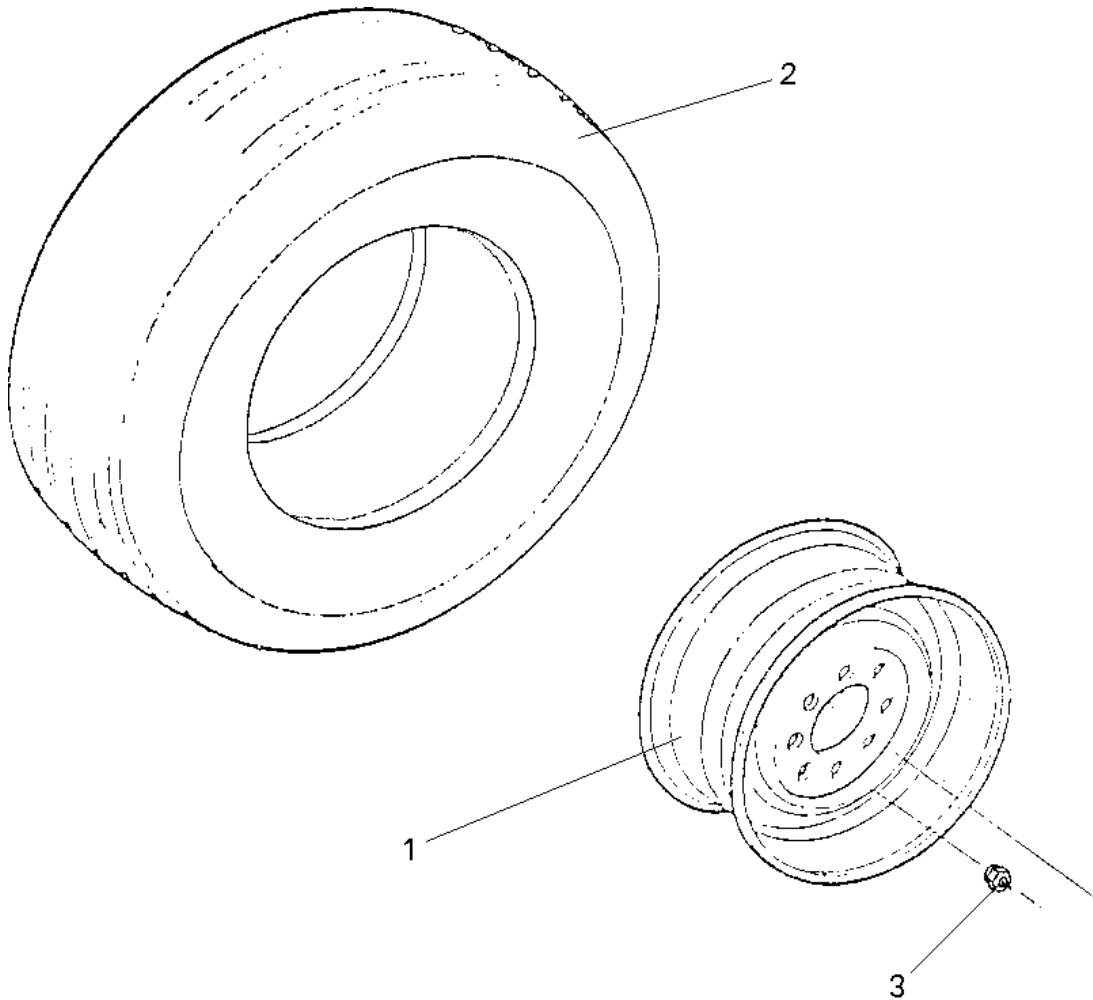
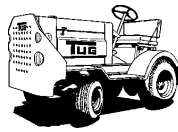


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
58-	60	O701828201	T6-3006-101	wheel and tire assembly (note 1)	2	As Req'd
58-1	-----	-----	T6-3003-103	wheel, 10-inch, 1-piece (note 1)	2	"
	417	W20380-5	T6-1300-121	wheel, 9x4, lock ring	2	"
	417	MS-24325-1	T6-1300-129	wheel, 9x4, 2-piece	2	"
	417	MS-24326-1	T6-1300-125	wheel, 10x5.5, 2-piece	2	"
58-2	60	1139200	T6-3004-103	tire, 20.5x8x10 (note 1)	2	"
	94	202-090-870-6	M3-1-2001	tire, goodyear highlander, 6.90x9	2	"
	94	26019754360450	23-101-103	tire, goodyear highlander, 6.50x10	2	"
	94	DP2B3/YD1DL	44-100-104	tire, industrial/mining, 6.90x9	2	"
	94	DP2C3/YD1DD	MD-D23-107	tire, industrial/mining, 6.50x10	2	"
	727	6.90X9X4	MG-ND-723	tire, soft shoe, 6.90x9x4	2	"
	727	6.50X10X5	MG-ND-724	tire, soft shoe, 6.50x10x5	2	"
58-3	-----	-----	T6-3003-105	lug nut	10	001 & Up

1. Wheel and tire assembly T6-3006-101 includes 10-inch, 1-piece wheel T6-3003-103 and 20.5x8x10-inch tire T6-3004-103.



**Figure 59: Wheel and Tire
Assembly, Rear**

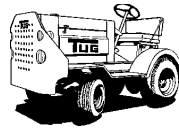


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
59-1	46	6.75X16.5	T6-2003-101	wheel, Dish-type	2	As Req'd
	46	FS27850	T6-2003-101	wheel, truck-type	2	"
	108	W20801X1	T6-2003-103	wheel, heavy-duty, welded 16 X 5.5	2	"
59-2	94	411-541-8068	T6-2004-103	tire, 8.00 x 16.5	2	"
	94	411-541-1068	T6-2004-153	tire, 10.00 x 16.5	2	"
	94	740345399	MH-1-602	tire, goodyear wrangler aT, 8.00 X 16.5	2	"
	94	411-620-8068	T6-1300-101	snow tire, 8.00 x 16.5	2	"
	94	411-620-1068	T6-1300-105	snow tire, 10.00 x 16.5	2	"
	727	7.5X16	MJ-ND-2103	tire, soft shoe, 7.50 x 16	2	"
	59-3	-----	T6-3003-105	lug nut	10	001 & Up
59-	-----	-----	T6-3061-165	Stud	8	"

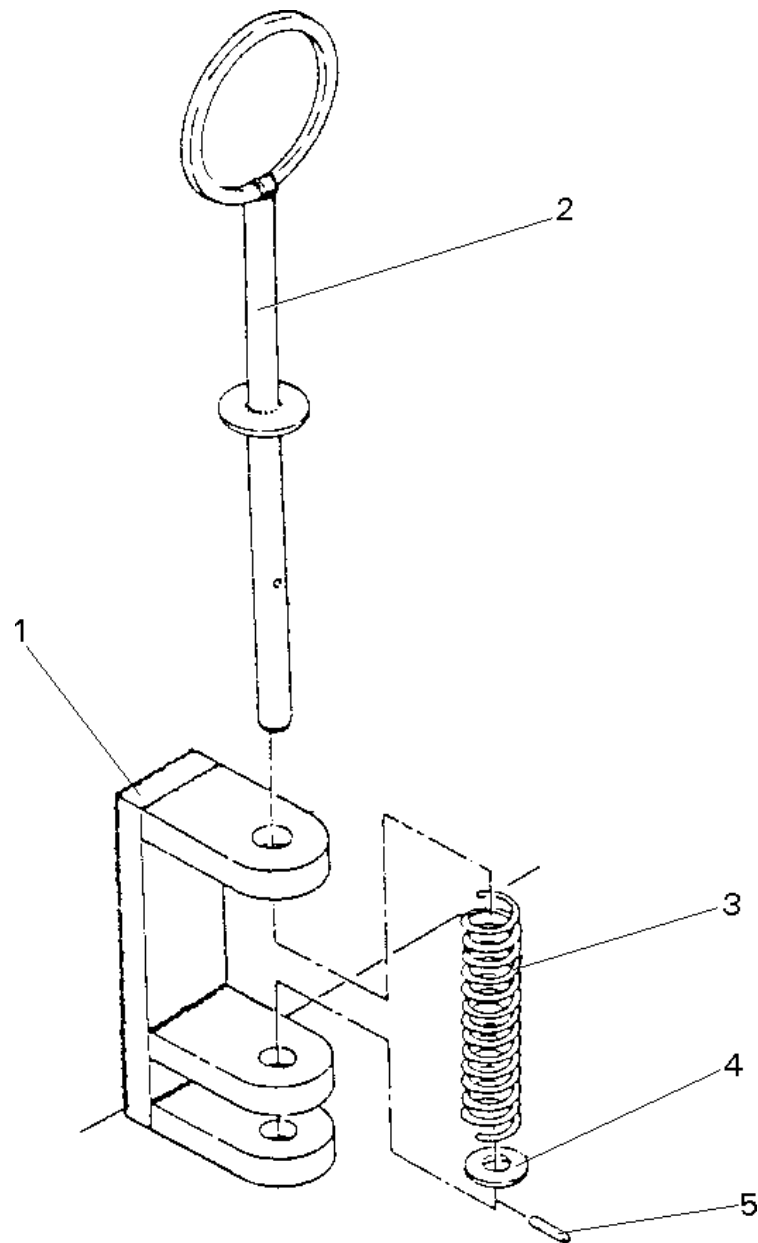
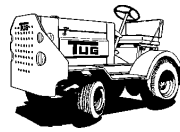


Figure 60: Hitch Assembly Front and Rear

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
60-	—	-----	T6-4014-103	e-hitch, standard, weld on	1	As Req'd
	—	-----	T6-4014-103FE	e-hitch, weld on, no pull ring, federal express type	1	"
	—	-----	T6-4044-103	E-hitch, bolt on, rectangular pull ring, Eastern air Lines type	1	"
	—	-----	T6-4014-151	e-hitch, bolt on, 10-1/2" bracket, tWA type	1	"
	—	-----	T6-4044-200	e-hitch, bolt on, 11-3/4" bracket, uPS domestic type	1	"
	—	-----	T6-4044-201	e-hitch, bolt on, dual throat, uPS germany type	1	"
60-1	392	HA-ECT-30	T6-7200-030	e-hitch, bolt on, bentz mobile type	1	"
	—	-----	T6-4014-125	bracket, weld on, 10-1/2"	1	Notes 1,2
	—	-----	T6-4044-105	bracket, bolt on, 8-3/8"	1	Note 3
	—	-----	T6-4014-151-11	bracket, bolt on, 10-1/2"	1	Note 4
	—	-----	T6-4044-200-7	bracket, bolt on, 11-3/4"	1	Note 5
	—	-----	T6-4044-201-10	bracket, bolt on, 18-1/4"	1	Note 6
60-2	—	-----	T6-4014-105	hitch pin, 6" i.d. pull ring, 18" long	1	Note 1
	—	-----	T6-4014-105FE	hitch pin, no pull ring	1	Note 2
	—	-----	T6-4044-107	hitch pin, rectangular pull ring, 8-7/8" long	1	Note 3
	—	-----	T6-4014-151-10	hitch pin, 5-1/2" i.d. pull ring, 18" long	1	Note 4
	—	-----	T6-4044-200-3	hitch pin, 6" i.d. pull ring, 18" long	1	Note 5
	—	-----	T6-4044-201-3	hitch pin, 6" i.d. pull ring, 25-3/8" long	1	Note 6
60-	—	-----	T6-4014-127	Fed Ex Cable	1	As Req'd
60-	—	-----	T6-4044-218	Tug E-Hitch -International	1	"

Note: quantities given are for one hitch assembly.

1. Used with standard Tug E-hitch T6-4014-103.
2. Used with Federal Express type E-hitch T6-4014-103FE.
3. Used with Eastern Air Lines type E-hitch T6-4044-103.
4. Used with TWA type E-hitch T6-4044-151.
5. Used with UPS domestic type E-hitch T6-4044-200.
6. Used with UPS Germany type E-hitch T6-4044-201.

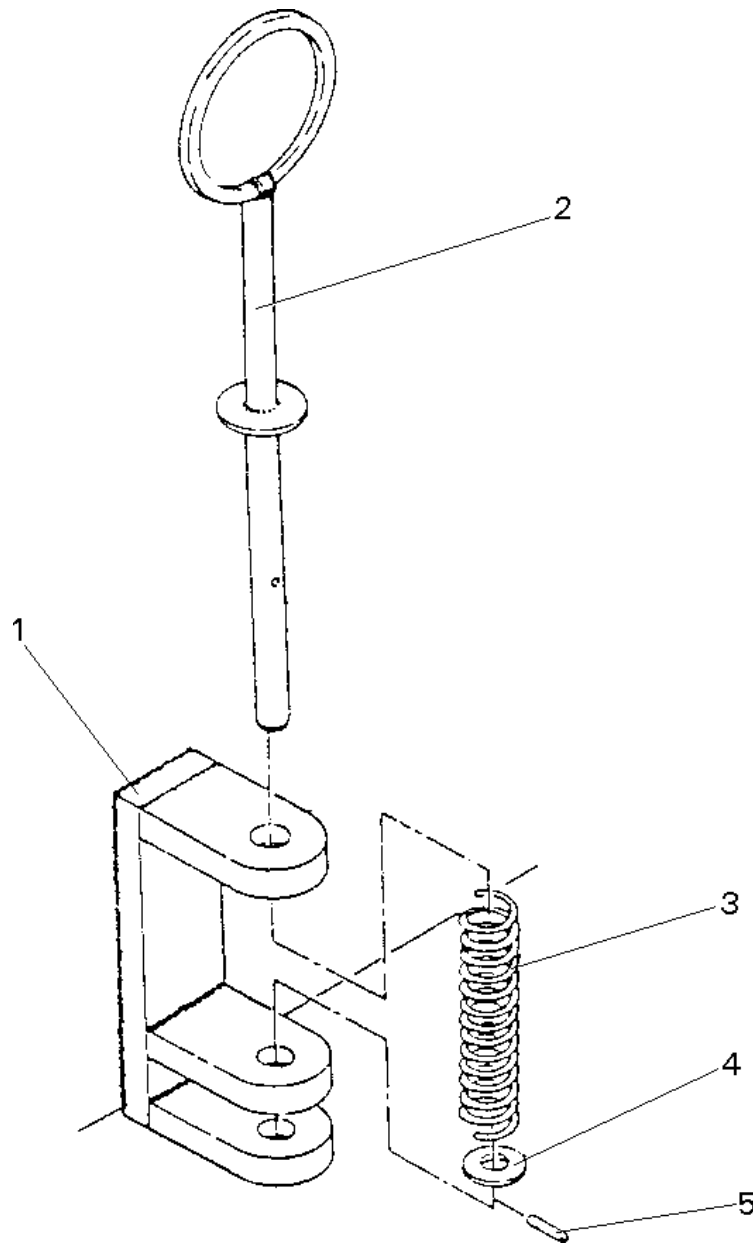
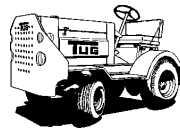


Figure 60: Hitch Assembly Front and Rear

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
60-3	---	-----	T6-4014-119	spring	1	Notes 1,2,4,5
	---	-----	T6-4014-119	spring	2	Note 6
	---	-----	T6-4044-123	spring	1	Note 3
60-4	---	-----	1"	flat washer	1	Notes 1,2
	---	-----	T6-4044-119	stop ring	1	Note 3
	---	-----	T6-4014-151-6	lock spacer	1	Note 4
	---	-----	1-1/16"	flat washer	1	Note 5
	---	-----	1-1/16"	flat washer	2	Note 6
60-5	---	-----	3/8X1-3/4"	roll pin	1	Notes 1,2
	---	-----	1/4X1-3/4"	roll pin	1	Notes 3,5,6
	---	-----	1/4X2"	roll pin	1	Note 4
60-	---	-----	T6-4014-127	hitch lift cable assembly, e-hitch	1	As Req'd
60-	105	CP-400-CA	T6-4025-103	Hitch, Holland 400	1	"
60-	105	PHT60A0L8	T6-4024-105	hitch, pintle	1	"
60-	105	XA-T-150-AF	MD-Y01-103	hitch, jakes/universal	1	"
60-	105	CP-T-190C	T6-9011-107	hitch, jakes, with lift handle	1	"
60-	174	ZB-98AM	MD-F13-103	hitch, rose	1	"
60-	174	2638	MG-ND-717	mounting bracket, slip-on rose hitch	1	"
60-	174	2639	MG-ND-718	plunger handle, slip-on rose hitch	1	"
60-	174	2640	MG-ND-719	plunger spring, slip-on rose hitch	1	"
60-	174	2641	MG-ND-720	plunger, slip-on rose hitch	1	"
60-	174	367	MG-ND-721	draw bar, slip-on rose hitch	1	"
60-	----	-----	T6-4026-101	Martin Marietta Hitch	1	"
60-	----	-----	T6-4026-101-4	Martin Marietta Hitch pin	1	"

Quantities given are for one hitch assembly.

1. Used with standard Tug E-hitch T6-4014-103.
2. Used with Federal Express type E-hitch T6-4014-103FE.
3. Used with Eastern Air Lines type E-hitch T6-4044-103.
4. Used with TWA type E-hitch T6-4044-151.
5. Used with UPS domestic type E-hitch T6-4044-200.
6. Used with UPS Germany type E-hitch T6-4044-201.

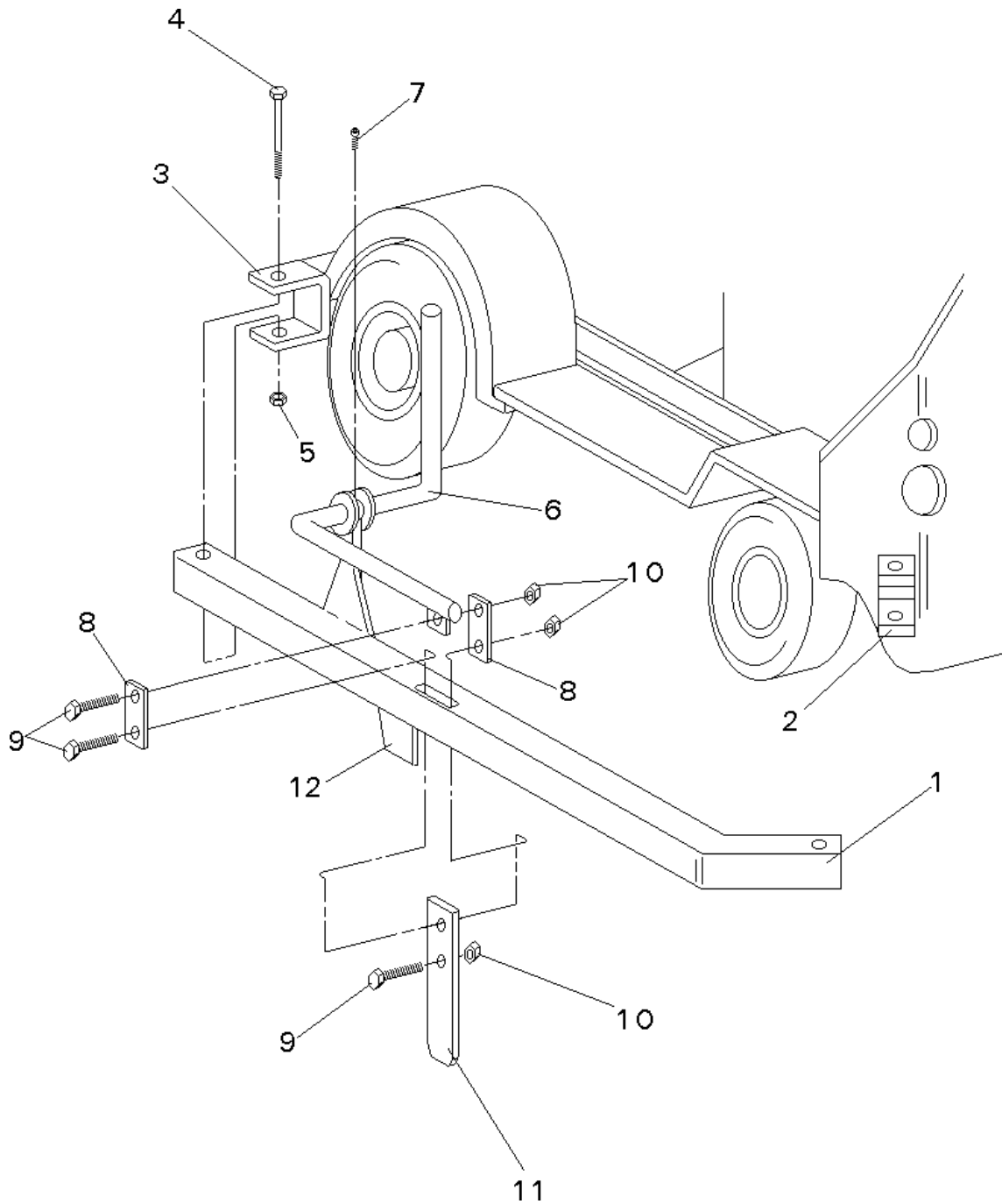
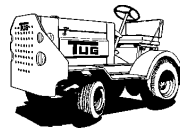


Figure 61: Hitch Assembly, Side

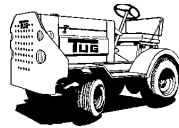


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
61-1	—	-----	T6-4052-103	rail assembly, side hitch	1	As Req'd
61-2	—	-----	T6-4052-117	front fitting, side hitch	1	"
61-3	—	-----	T6-4052-119	rear fitting, side hitch	1	"
61-4	—	-----	3/4-10NCX7-1/2"	hex head bolt	2	"
61-5	—	-----	3/4-10NC	locknut	2	"
61-6	—	-----	T6-9009-101	release lever, non-cab models	1	"
	—	-----	T6-9010-101	release lever, cab models	1	"
61-7	79	81500	-----	grease fitting	1	"
61-8	—	-----	T6-4052-121	lift connector link	2	"
61-9	—	-----	1/4-20NCX1"	hex head bolt	3	"
61-10	—	-----	1/4-20NC	locknut	3	"
61-11	—	-----	T6-4052-109	blade, side hitch	1	"
61-12	----	-----	T6-4052-115	Lower Fin, Side Hitch	1	"

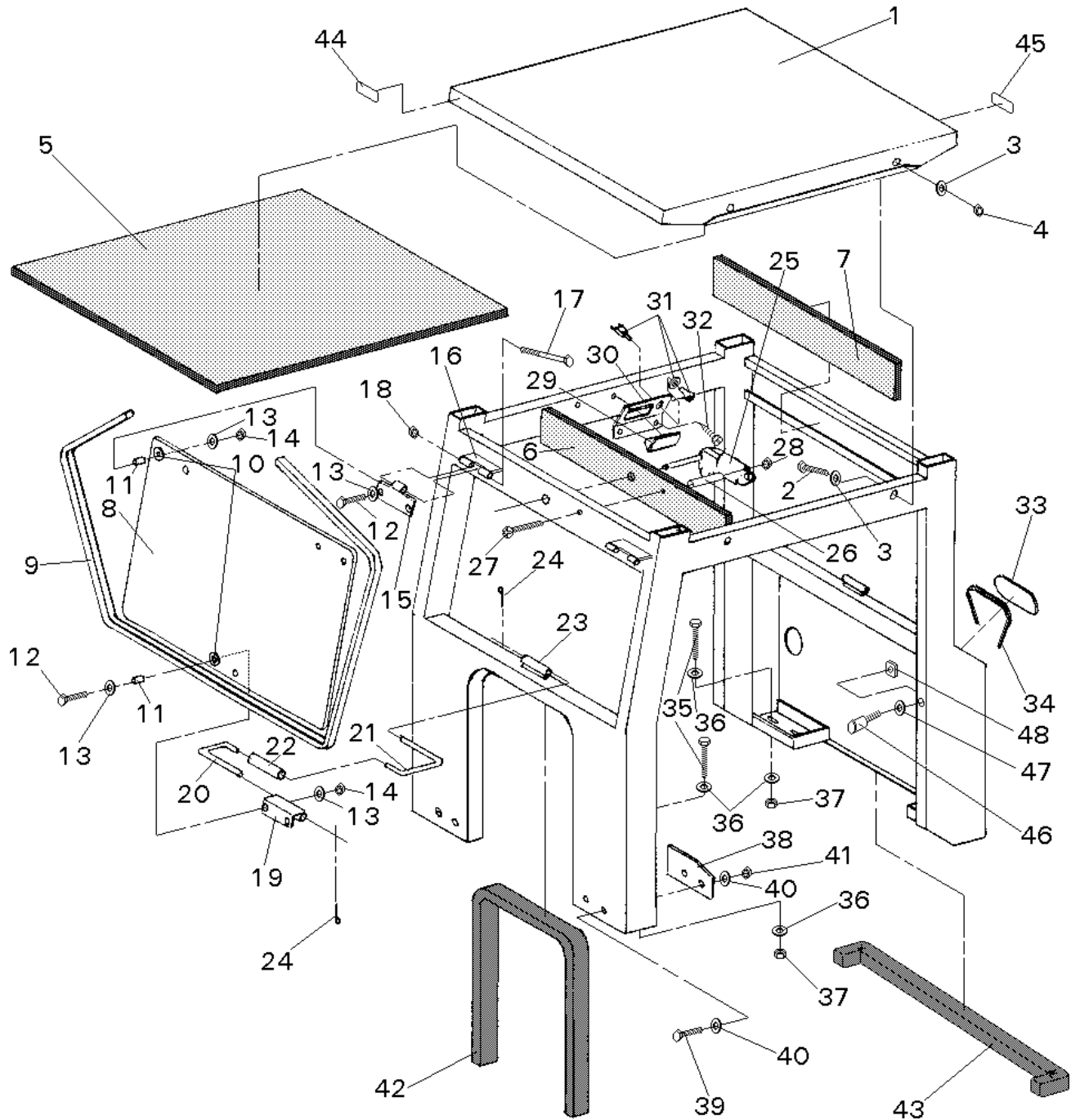
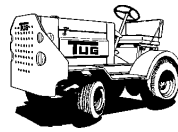


Figure 62: Cab Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
62-	—	-----	T6-9003-101	cab, complete	1	As Req'd
	—	-----	T6-9003-305	econo-cab (note 1)	1	"
	—	-----	T6-9006-103	overhead guard	1	"
62-	—	-----	T6-9006-105	hood stop, overhead guard	1	"
62-	----	-----	T6-7010-333	Cab Wiring Harness	1	"
62-1	—	-----	CMA-202	roof panel	1	Note 2
62-2	—	-----	3/8-16NCX2-1/4"	hex head bolt	4	"
62-3	—	-----	3/8	flat washer	8	"
62-4	—	-----	3/8-16NC	locknut	4	"
62-5	—	-----	T6-9003-159	head liner	1	"
62-6	—	-----	CMA-509	liner, front header	1	"
62-7	—	-----	CMA-501	liner, rear header	1	"
62-	—	-----	CMA-213	Removeable inner panel, front, left	1	As Req'd
62-	—	-----	CMA-215	removeable inner panel, front, right	1	"
62-	—	-----	CMA-217	cowl, wiring harness, right front inner panel	1	"
62-	—	-----	CMA-219	removeable outer front panel	1	"
62-8	—	-----	T6-9003-111	glass, front windshield	1	Note 2
62-	—	-----	T6-9003-109	glass, rear windshield	1	Note 3
62-	----	-----	T6-9003-511	Rear Window, Sliding (UPS)	1	As Req'd
62-9	283	7500892	T6-9003-195	trim seal edging	Ref.	Note 2
62-10	16	2558	T6-9003-171	grommet, rubber	Ref.	"
62-11	—	-----	T6-9003-211	bushing, steel	Ref.	"
62-12	—	-----	1/4-20NCX1"	hex head bolt	Ref.	"
62-13	—	-----	1/4	flat washer	Ref.	"
62-14	—	-----	1/4-20NC	locknut	Ref.	"
62-15	—	-----	CMA-308	hinge, window, male (note 4)	Ref.	"
62-16	—	-----	CMA-315	hinge, window, female (note 4)	Ref.	"
62-	—	-----	T6-9003-139	hinge, window (note 4)	Ref.	Note 2
62-17	—	-----	3/8-16NCX6-1/2"	hex head bolt	Ref.	"
62-18	—	-----	3/8-16NC	Locknut, nylon insert	Ref.	"
62-19	—	-----	CMA-319	bottom closure bracket (note 5)	Ref.	"
62-20	—	-----	CMA-316	break-over rod, short (note 5)	Ref.	"
62-21	—	-----	CMA-313	break-over rod, long (note 5)	Ref.	"
62-22	—	-----	CMA-314	tube, break-over handle (note 5)	Ref.	"
62-23	—	-----	CMA-318	bottom closure bracket (note 5)	Ref.	"

1. Econo-cab T6-9003-305 consists of complete cab T6-9003-101 less doors, rear window and heater/defroster.
2. Used with full cab T6-9003-101 and Econo-cab T6-9003-305.
3. Used with full cab T6-9003-101.
4. Window hinge T6-9003-139 includes male hinge CMA-308 (item 15) and female hinge CMA-315 (item 16).

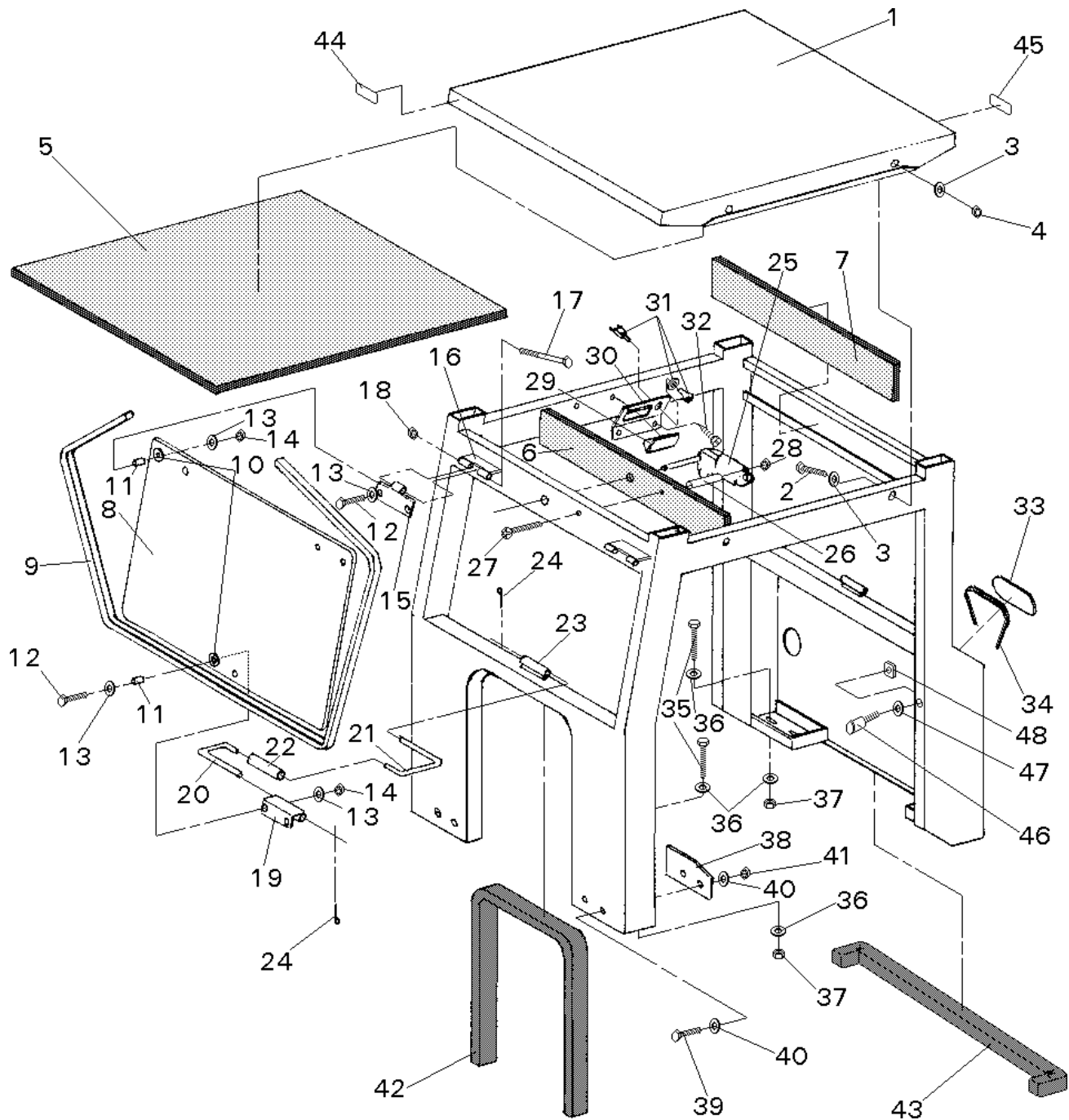
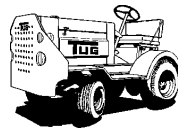


Figure 62: Cab Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
62-24	—	-----	1/8X1"	Cotter pin (note 5)	Ref.	"
62-	—	-----	T6-9003-141	break-over handle, window (note 5)	Ref.	"
62-	—	-----	T6-9003-149	cowl vent, with screen, front	2	Note 6
62-25	216	WWF12C1-720	T6-9003-121	motor, windshield wiper	1	Note 2
62-	216	LE721156-14	T6-9003-123	arm, windshield wiper	1	"
62-	216	BD721020-14	T6-9003-125	blade, windshield wiper	1	"
62-	158	35-300	T6-9003-209A	switch, windshield wiper	1	"
62-26	—	-----	5/16X2"	roll pin, spacer, windshield wiper motor	1	"
62-27	—	-----	#10-32NFX2-1/2"	screw	1	"
62-28	—	-----	#10-32NF	locknut	1	"
62-29	268	61031-3	T6-9003-197	lamp, dome light	1	"
62-	268	90401	T6-9003-197-1	lens, dome light	1	"
62-30	—	-----	CMA-301	bracket, dome light	1	"
62-31	158	35-300	T6-9003-209A	switch, dome light	1	"
62-32	—	-----	3/8X3/4"	sheet metal screw	2	Note 2
62-33	394	30-21-12	T6-9003-163	window, fuel gauge	1	"
62-34	283	75000533	T6-9003-165	gasket, fuel gauge window	Ref.	"
62-35	—	-----	1/2-13NCX3-1/2"	hex head bolt	6	Note 7
62-36	—	-----	1/2	flat washer (note 8)	12	"
62-37	—	-----	1/2-13NC	locknut	6	"
62-38	—	-----	CMA-302	closeout plate, lower front	2	Note 2
62-39	—	-----	3/8-16NCX3"	hex head bolt	4	"
62-40	—	-----	3/8	flat washer	8	"
62-41	—	-----	3/8-16NC	locknut	4	"
62-42	—	-----	MG-1-320	trim lok	Ref.	As Req'd
	862	4100-1/8C	T6-9003-351	hood seal, rubber bead	Ref.	"
62-43	—	-----	T6-9003-153	Rear seal, foam	Ref.	"
	862	75001362	CMA-504	rear seal, rubber bead	Ref.	"
62-44	—	-----	T6-500-102	Reflector, Amber Rect.	4	Note 7
62-45	—	-----	T6-500-103	reflector, red, rear	8	"
62-	—	-----	T6-7010-333	wiring harness, cab, single connector	1	As Req'd

2. Used with full cab T6-9003-101 and Econo-cab T6-9003-305.

3. Used with full cab T6-9003-101.

4. Window hinge T6-9003-139 includes male hinge CMA-308 (item 15) and female hinge CMA-315 (item 16).

5. Window break-over handle T6-9003-141 includes items 19 through 24.

6. Used on units equipped with full cab T6-9003-101 or econo-cab T6-9003-305 through serial number 4141.

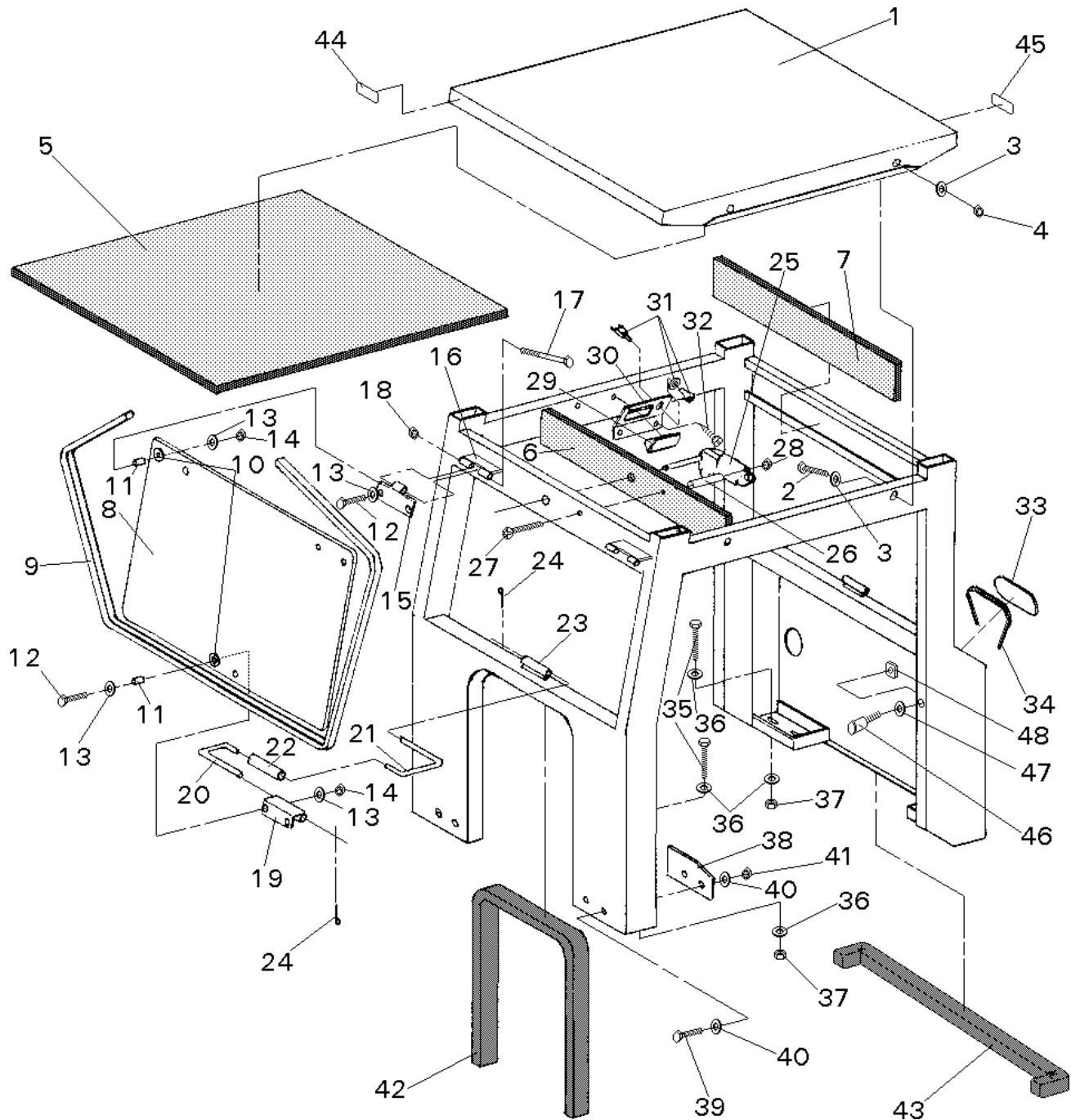
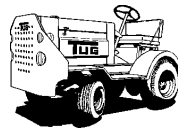


Figure 62: Cab Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
62-	16	2281	T6-7010-333SA	wiring harness, cab, multiple connectors	1	As Req'd
62-			T6-9011-237	grommet, wiring	Ref.	Note 2
62-			T6-1300-321	wire cover, tail light wire	2	As Req'd
62-46	210	10339-16	T6-9003-303	striker bolt, cab door	2	Note 3
62-47			3/8	flat washer	Ref.	"
62-48			CMH-316	plate, striker bolt	2	"
62-			T6-9003-148	door, rH, without side hitch	1	Note 3
			T6-9003-148FE	door, rH, with side hitch	1	"
62-			T6-9003-147	door, lH	1	"
62-	304	712650-7	CMA-605	mirror, west coast type	2	As Req'd
	22	7328	T6-9011-347	mirror, 5", round	2	"
	22	7040	T6-9011-375	mirror, 5"x10"	2	"
62-	22	4202	T6-9011-376	bracket, 5"x10" mirror	2	"
62-	317	2057C003C	T6-9004-103	heater, 12-volt	1	"
			T6-9004-103GER	heater, 12-volt, Padded	1	"
62-	317	TC101036	T6-9004-103-1A	core, heater, amfab	1	"
	178	800-2	T6-9004-103-1	core, heater, sGM	1	"
62-	317	TC140009	T6-9004-103-2A	motor, heater, amfab	1	"
	178	1800-009	T6-9004-103-2	motor, heater, sGM	1	"
62-	317	TC19002	T6-9004-103-3A	fan, heater, amfab	1	"
	178	PC-1000-3	T6-9004-103-3	fan, heater, sGM	1	"
62-	239	3200-12	T6-9011-105	fan, cab ventilation	1	"
62-	297	305A	T6-1300-251	strobe light, amber	1	"
	118	876-3101	T6-1300-223	beacon, flashing, amber	1	"
62-			T6-9011-332	grab handle	Ref.	"
62-			T6-9011-340	turn signal box, roof mount	2	"
62-			CMA-213	removeable panel, inside front, left	1	"
62-			CMA-215	removeable panel, inside, front, right	1	"
62-			CMA-219	removeable panel, outside, front	1	"
			MH-ND-442	Mirror, Inside	1	"
			CMA-607	Defroster Hose	1	"
			T6-1300-251	Strobe	1	"
			T6-9011-391	Rotating	1	"
			T6-1300-251B	Rotating Blue	1	"

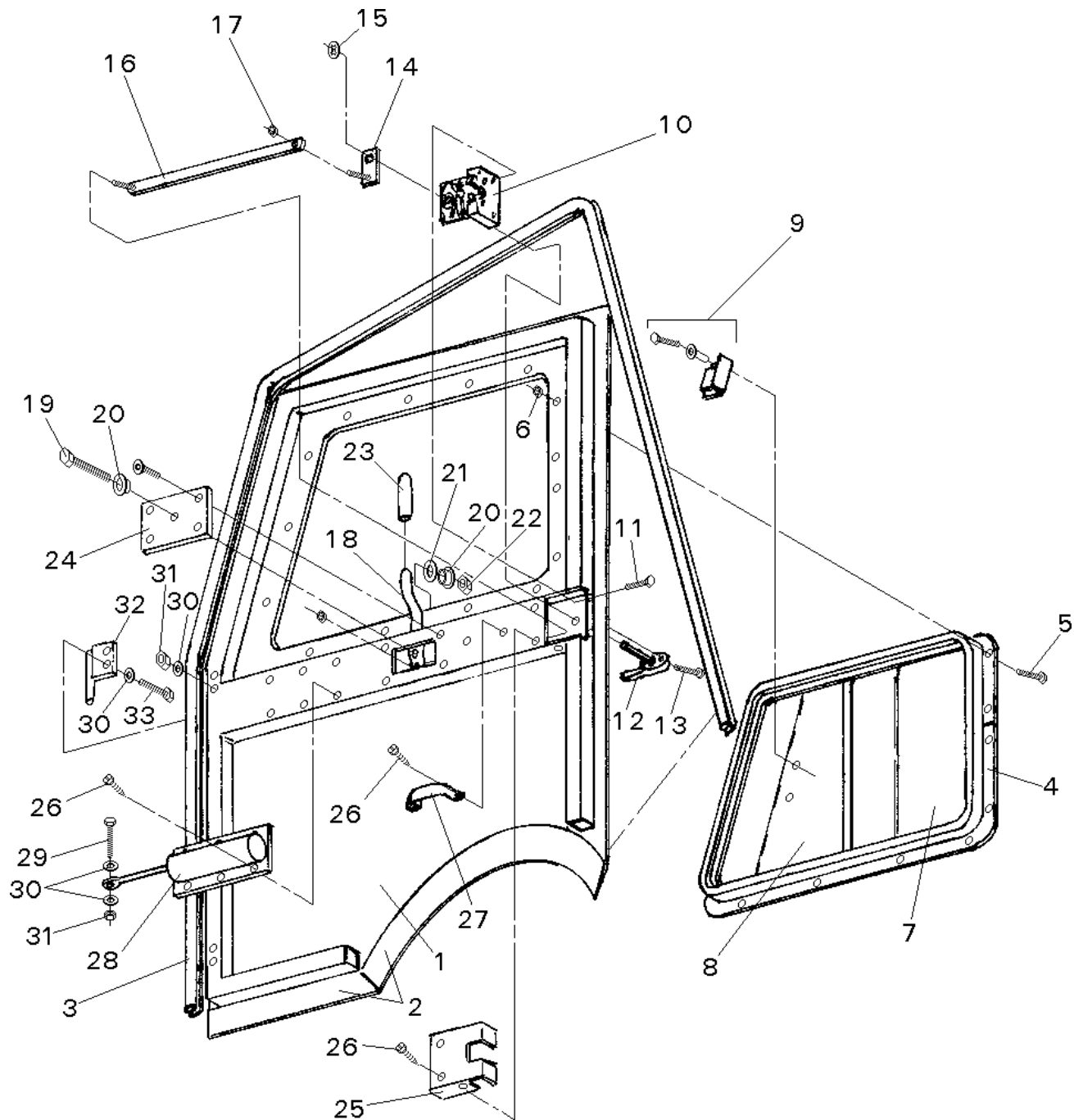
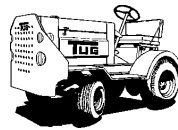


Figure 63: Cab Door Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
63-1	—	-----	T6-9003-148	door, rH, without side hitch	1	As Req'd
	—	-----	T6-9003-148FE	door, rH, with side hitch	1	"
63-	—	-----	T6-9003-147	door, IH	1	001 & Up
63-2	—	-----	CMA-507	door seal, bottom	2	"
63-3	862	75001362	CMA-504	door seal, rubber bead	Ref.	"
63-	----	-----	T6-4006-113	Trim, UPS	Ref.	As Req'd
63-	----	-----	T6-9003-153	Foam Strip, Rear	Ref.	"
63-4	----	10000978RO	CMA-404	window assembly, aluminum frame, rh complete (note 1)	1	As Req'd
	283	75000601	T6-9003-169	window frame, rubber (note 1)	Ref.	"
	283	75000047	T6-9003-173	channel, sliding window, rubber frame (note 1)	2	"
	283	AS-1524-61	T6-9003-175	spacer, rubber, rubber frame window (note 1)	Ref.	"
	283	75000687	T6-9003-177	filler strip, rubber window frame (note 1)	Ref.	"
	283	75000026	T6-9003-179	sealer, fixed window, rubber frame (note 1)	Ref.	"
63-5	—	-----	#8-32NFX1/2"	screw, aluminum frame window	Ref.	"
63-6	—	-----	#8-32NF	locknut, nylon insert	Ref.	"
63-7	----	181903	CMA-402	STATIONARY GLASS, ALUMINUM FRAME WINDOW	2	Note 2
	273	30-21-13	CMA-402TP	STATIONARY GLASS, ALUMINUM FRAME WINDOW	2	"
	----	30-21-13	T6-9003-113	stationary glass, rubber frame	2	As Req'd
63-8	----	181904	CMA-401	Sliding GLASS, ALUMINUM FRAME WINDOW	2	Note 2
	339	ESK-1576A	CMA-401TP	Sliding GLASS, ALUMINUM FRAME WINDOW	2	"
	273	30-21-15	T6-9003-115	sliding glass, rubber frame	2	As Req'd
63-9	—	-----	CMA-406	latch kit, 3-1/2" base, 2-7/16" hole centers, aluminum window	2	Note 2
	—	-----	CMA-406TP	latch kit, 3-3/4" base, 3" hole centers, aluminum window	2	"
	396	32S00002	T6-9003-117	knob, sliding window, rubber frame	2	As Req'd
63-	16	2558	T6-9003-171	rubber grommet, sliding window knob, rubber frame	2	"
63-	—	-----	5/16-18NCX3/4"	truss head bolt	2	"
63-	339	ESK-1576A	CMA-401TP	window assembly, IH complete (note 1)	1	"

1. Aluminum frame window assemblies CMA-404 (right hand) and CMA-403 (left hand) are recommended for replacement of rubber frame window arrangements used on early tractors. Rubber frame windows can be replaced with aluminum frame windows with light drilling and no cutting.
2. Stationary glass CMA-402, sliding glass CMA-401 and window latch CMA-406 are applicable to aluminum frame windows with latch mounting holes on 2-7/16-inch centers and 3-1/2-inch window latch base. Stationary glass CMA-402TP, sliding glass CMA-401TP and window latch CMA-406TP are applicable to aluminum frame windows with latch mounting holes on 3-inch centers and 3-3/4-inch window latch base.

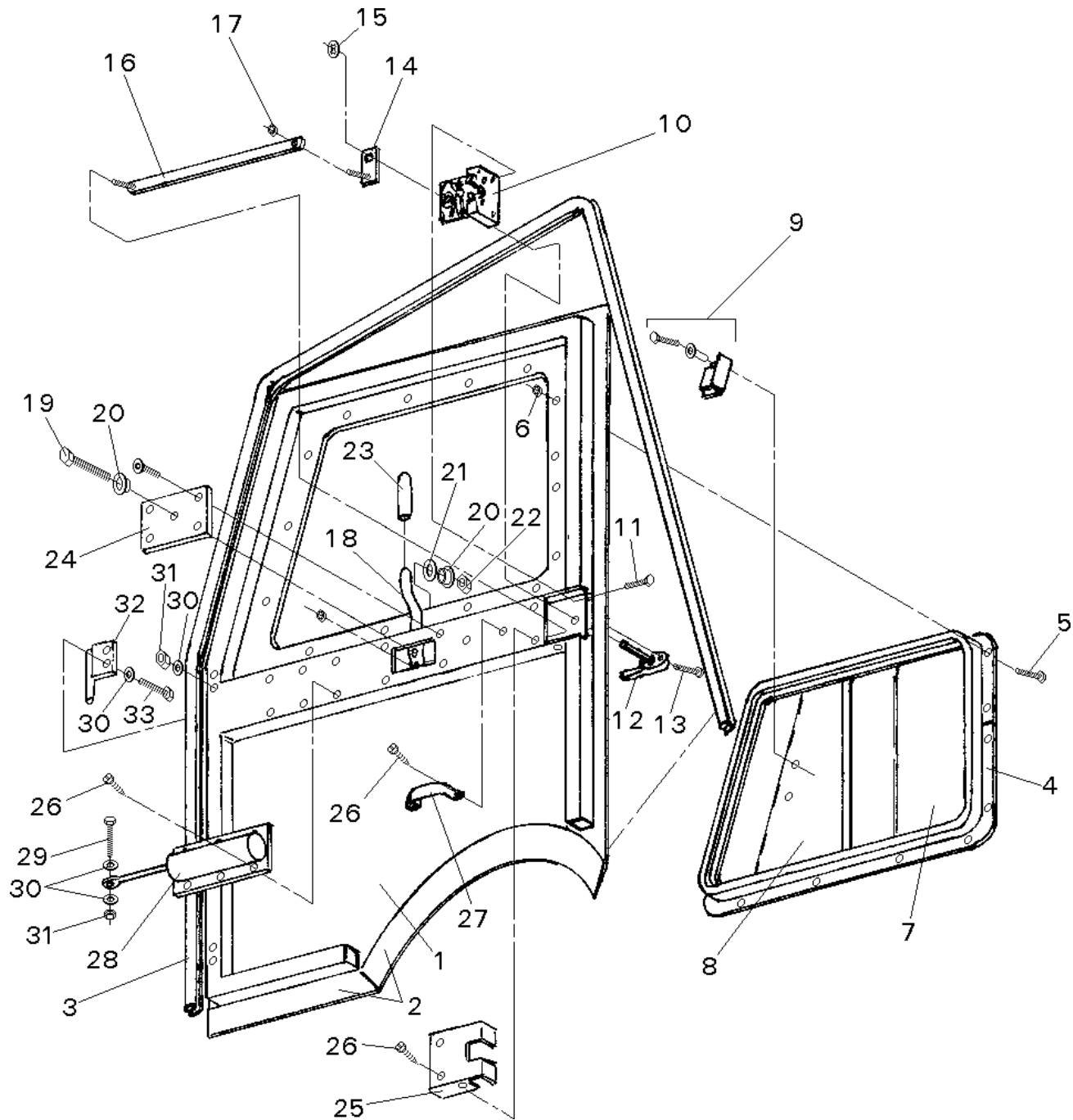
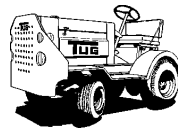


Figure 63: Cab Door Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
63-10	210	10374-16	T6-9003-302	latch mechanism, rH door	1	3732 & Up
	283	58ZNRH	T6-9003-108	latch mechanism, rH door	1	001-3731
63-	210	11443-16	T6-9003-301	latch mechanism, lH door	1	3732 & Up
	283	57ZNLH	T6-9003-107	latch mechanism, lH door	1	001-3731
63-11	—	-----	1/4-20NCX1-1/2"	hex head bolt	4	3732 & Up
63-	—	-----	1/4-20NC	locknut, nylon insert, latch mechanism	4	"
63-12	283	GD303	T6-9003-105	door handle, outside	2	001 & Up
63-13	—	-----	#10-32NFX3/4"	screw	4	"
63-	—	-----	#10-32NF	locknut, nylon insert, door handle	4	"
63-14	—	-----	T6-9003-133	latch operator (note 3)	2	001 & Up
63-	—	-----	T6-9003-307	spacer, latch lever (note 3)	2	001-3731
63-15	—	-----	T6-9003-309	retainer, door handle	2	001 & Up
63-16	—	-----	CMA-321	rod, door handle linkage (note 3)	2	3732 & Up
	—	-----	T6-9003-135	rod door handle linkage	2	001-3731
63-17	—	-----	1/4-20NC	locknut (note 3)	2	3732 & Up
	—	-----	T6-9003-311	retainer, door handle linkage rod (note 3)	2	001-3731
63-18	—	-----	CMA-320	door handle, inside (note 3)	2	3732 & Up
	283	74ZN	T6-9003-127	door handle, inside (note 3)	2	001-3731
	—	-----	CMA-323	door handle, RH inside, spoon handle (note 4)	1	As Req'd
63-	—	-----	CMA-322	door handle, lH inside, spoon handle (note 4)	1	"
63-19	—	-----	3/8-16NCX2-3/4"	hex head bolt (note 3)	2	3732 & Up
63-20	62	SF1216-4	CMA-604	bushing, inside door handle (note 3)	4	"
63-21	—	-----	1/2	flat washer (note 3)	2	"
63-22	—	-----	3/8-16NC	locknut, nylon insert (note 3)	2	"
63-23	241	325-89	CMA-609	grip, handle (note 3)	2	"
63-24	—	-----	CMH-300	cover plate, door handle, inside (note 3)	2	"

3. Used on units with inside door handle located at center of door.

4. Used on units with inside door handle located at rear of door.

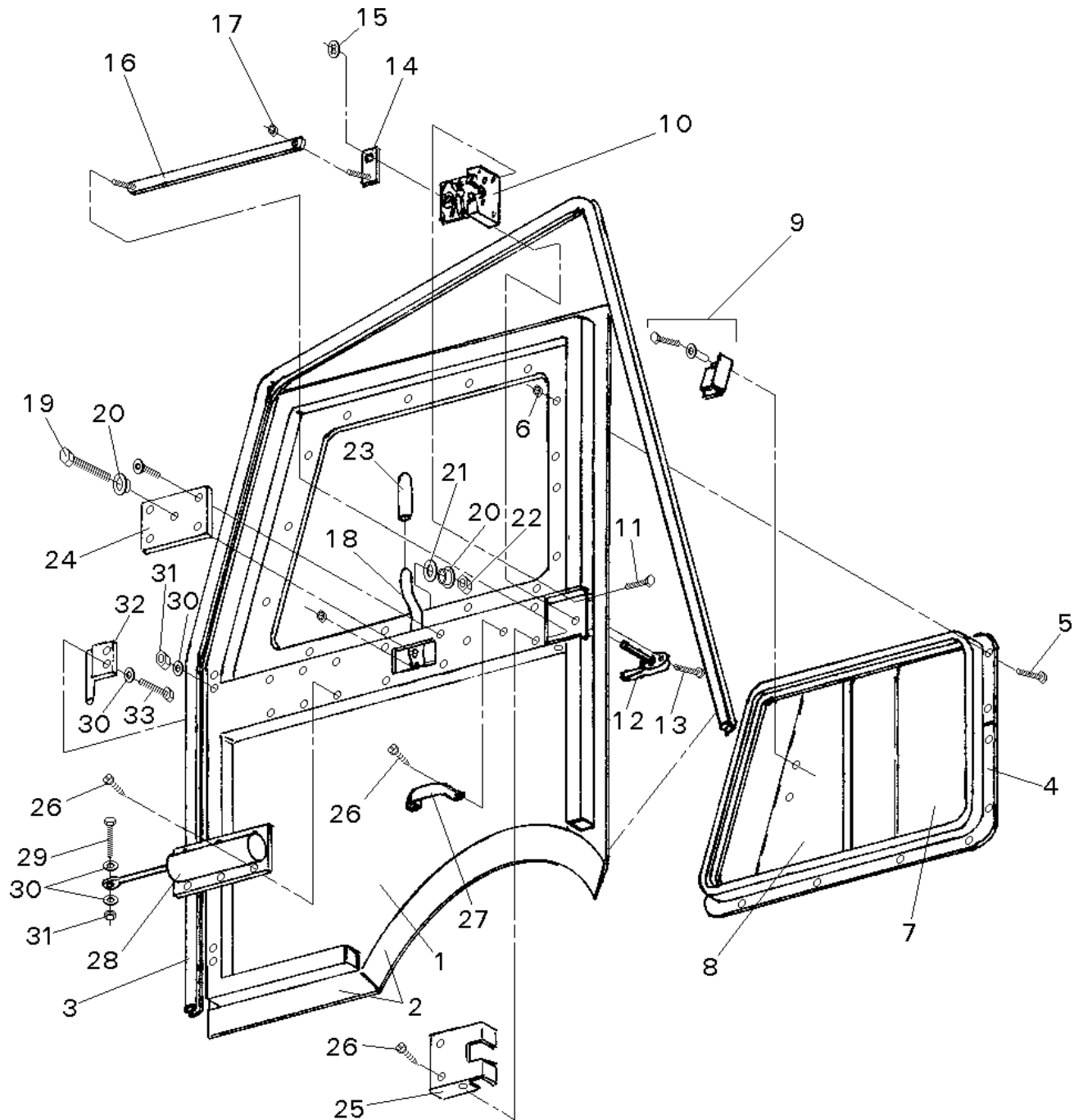
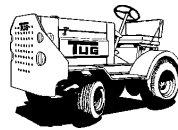


Figure 63: Cab Door Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
63-25	—	-----	CMA-118	cover plate, door latch mechanism	2	001 & Up
63-26	—	-----	3/8X3/4"	sheet metal screw	Ref.	"
63-	210	10795-16	T6-9003-303	striker bolt, cab door	2	001 & Up
63-	—	-----	CMH-316	plate, striker bolt	2	"
63-27	—	-----	T6-4005-109	grab handle, no arm rest	2	As Req'd
	—	-----	T6-9003-190	grab handle, with arm rest, rH	1	"
63-	—	-----	T6-9003-189	grab handle, with arm rest, lH	1	"
63-28	—	-----	T6-9003-313	door stop assembly, spring and tube type	2	As Req'd
	—	-----	T6-9003-182	door stop assembly, rH, sliding rod type (note 5)	1	"
63-	—	-----	T6-9003-181	door stop assembly, lH, sliding rod type (note 5)	1	"
63-	—	-----	T6-9003-131	sliding rod, sliding rod type door stop (note 5)	2	"
63-29	—	-----	3/8-16NCX1-1/2"	hex head bolt	2	001 & Up
63-30	—	-----	3/8	flat washer	12	"
63-31	—	-----	3/8-16NC	locknut	6	"
63-32	—	-----	CMA-123	door hinge, rH, top half	2	"
63-	—	-----	CMA-124	door hinge, lH, top half	2	"
63-33	—	-----	3/8-16NCX2"	hex head bolt	4	"
63-	603	30-12-18	CMH-410	window, lower, rH door	1	Note 6
63-	283	7500053	T6-9003-165	gasket, window, lower, rH door	Ref.	"
63-	304	712650-7	CMA-605	mirror, west coast type	2	As Req'd
	22	7328	T6-9011-347	mirror, 5", round	2	"
	22	7040	T6-9011-375	mirror, 5"x10"	2	"
63-	22	4202	T6-9011-376	bracket, 5"x10" mirror	2	"
63-	----	-----	T6-9003-302-01	Latch Spring	2	"
63-	----	-----	T6-9003-106	UPS Door Strap	2	"

5. Sliding rod type door stop assemblies T6-9003-182 (right hand) and T6-9003-181 (left hand), include slotted bracket, spring and tongue catch, but do not include sliding rod T6-9003-135.
6. Used in right hand door T6-9003-148FE for tractors with side hitch.

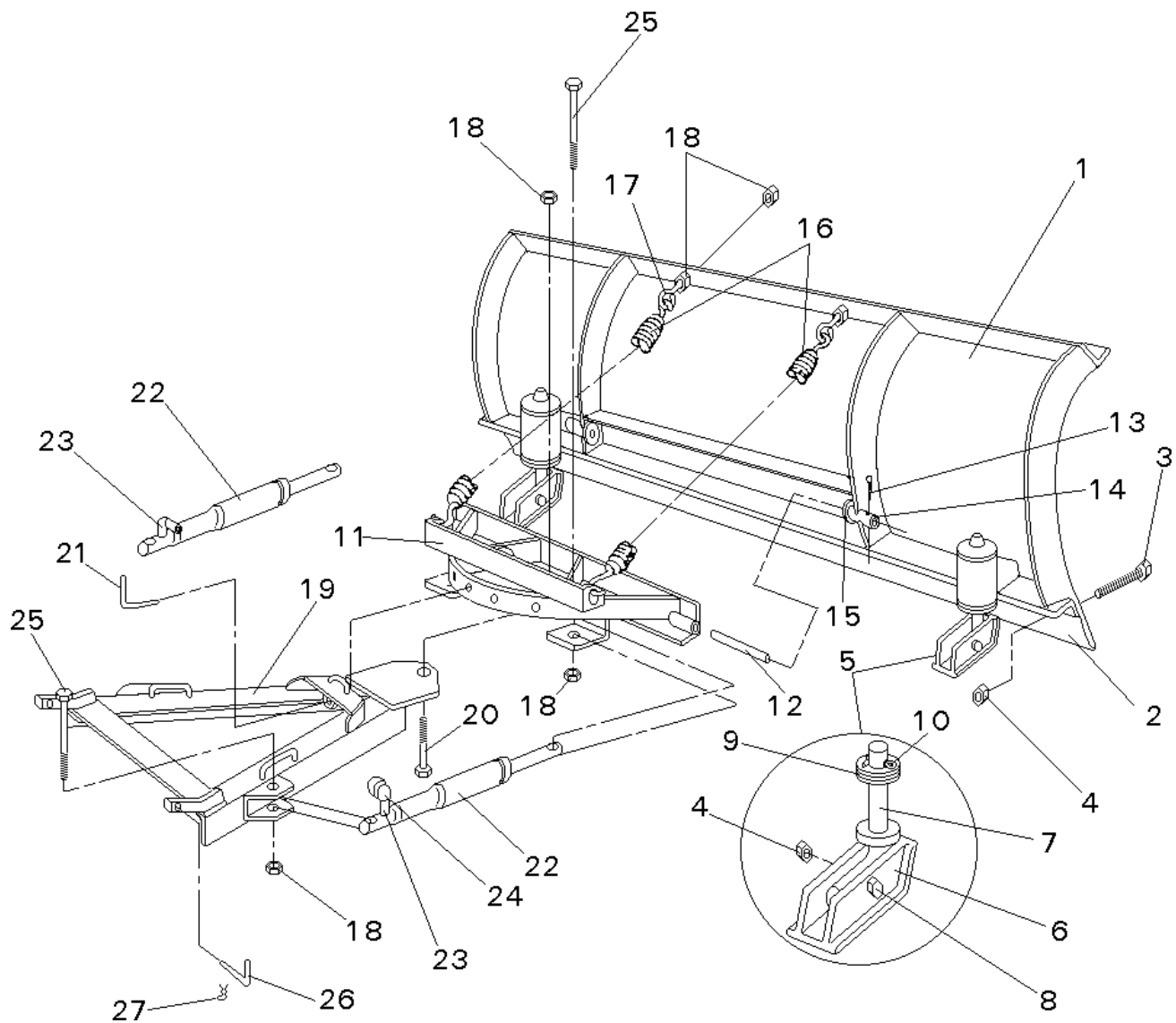
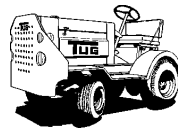


Figure 64: Snow Plow Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
64-	—	-----	T6-1300-197	snow plow assembly, complete	1	As Req'd
64-1	—	-----	T6-1300-197-1	moldboard, 78" (note 1)	1	"
64-2	136	O9131	T6-1300-197-2	cutting edge, 78" (note 1)	1	"
64-3	—	08184	T6-1300-197-3	hex head bolt (note 1)	10	"
64-4	—	-----	1/2-13NC	locknut (notes 1, 2)	12	"
64-5	136	12493	T6-1300-197-4	runner and spindle assembly (notes 1, 2)	2	"
64-6	136	O7006	T6-1300-197-5	runner (note 2)	2	"
64-7	136	12057	T6-1300-197-6	spindle (note 2)	2	"
64-8	—	-----	1/2-13NCX3"	hex head bolt (note 2)	2	"
64-9	—	-----	1-1/4	flat washer (note 2)	Ref.	"
64-10	136	22083	T6-1300-197-8	linch pin (note 2)	2	"
64-11	136	12326	T6-1300-197-17	sector	1	"
64-12	136	O9119	T6-1300-197-11	pivot pin (note 3)	2	"
64-13	—	-----	3/16X3"	cotter pin (note 3)	2	"
64-14	136	12149	T6-1300-197-200	pivot pipe (note 1)	2	"
64-15	136	O7141	T6-1300-197-201	washer, reinforcing (note 1)	2	"
64-16	136	O7017	T6-1300-197-13	trip spring	2	"
64-17	—	-----	T6-1300-197-12	eye bolt	2	"
64-18	—	-----	5/8-11NC	locknut	9	"
64-19	136	13299	T6-1300-197-164	a-frame	1	"

Note:tractors equipped with snow plow must be equipped with a 70 amp alternator.

1. Moldboard T6-1300-197-1 (item 1) includes cutting edge T6-1300-197-2 (item 2), 1/2-13NCx2" hex head bolts and locknuts for cutting edge mounting (items 3 and 4), runner and spindle assembly T6-1300-197-4 (item 5), pivot pipe T6-1300-197-200 (item 14) and reinforcing washer T6-1300-197-201 (item 15).

2. Runner and spindle assembly T6-1300-197-4 (item 5) includes runner T6-1300-195-5 (item 6), spindle T6-1300-197-6 (item 7), 1/2-13NCx3" hex head bolt with locknut (items 8 and 4), 1-1/4" flat washers (item 9) and linch pin T6-1300-197-8 (item 10).

3. Pivot pin T6-1300-197-11 (item 12) includes 3/16 x 3" pivot pin (item 13).

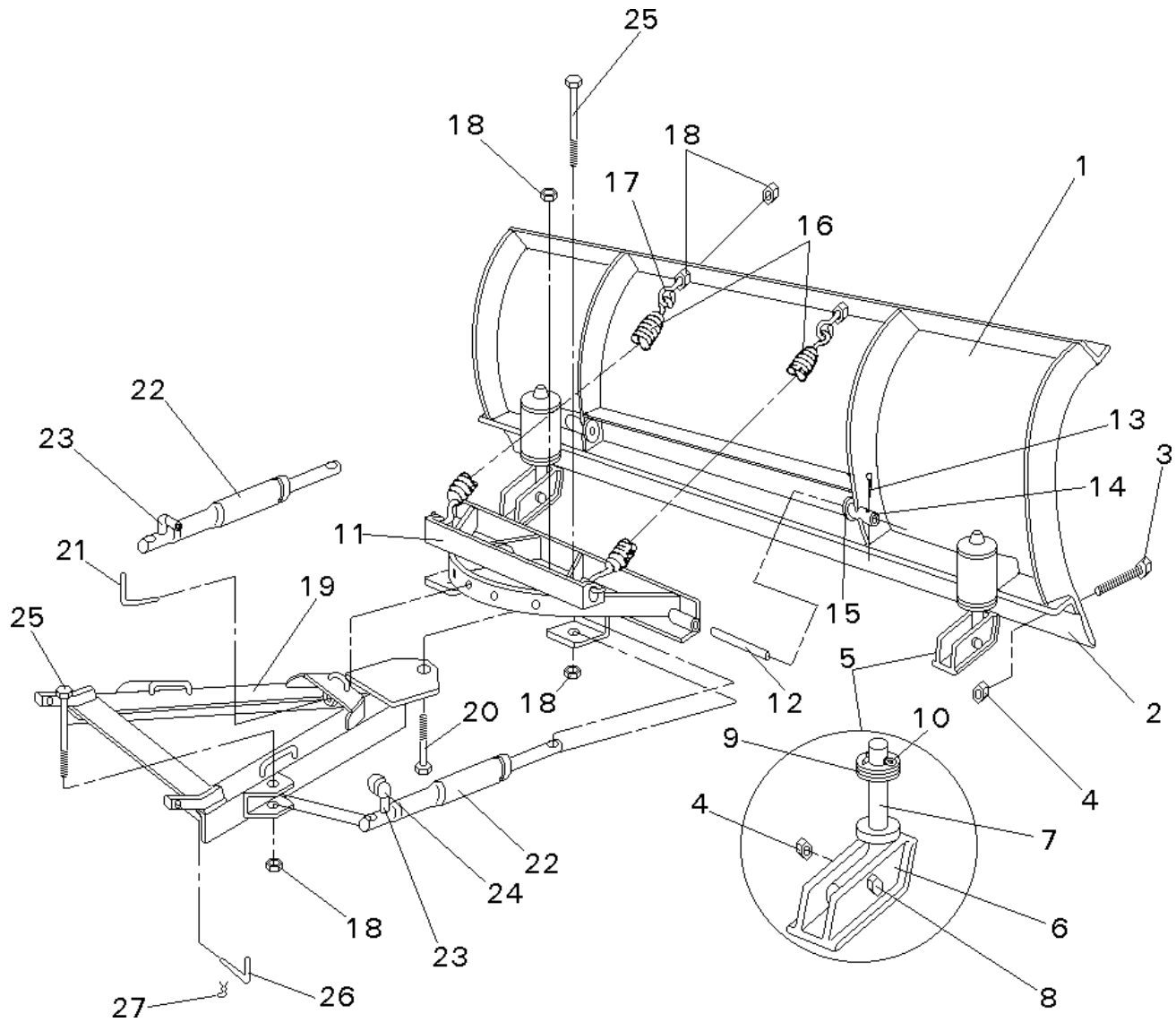
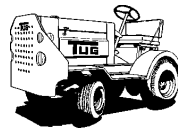


Figure 64: Snow Plow Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
64-20	—	-----	5/8-11NCX2-3/4"	hex head bolt	1	"
64-21	136	13003	T6-1300-197-15	sector pin	1	"
64-22	136	O5810	T6-1300-197-25A	ram, angling, without fittings (notes 4, 5)	2	"
64-	—	-----	T6-1300-197-25	ram, angling, with fittings, rH (note 4)	1	"
64-	—	-----	T6-1300-197-24	ram, angling, with fittings, lH (note 5)	1	"
64-23	136	21855	T6-1300-197-26	swivel, e-11, 1/4x90° (notes 4, 5)	2	"
64-24	136	15072	T6-1300-197-28	coupler, 1/4", RH angling ram (notes 4, 6)	1	"
64-	136	21856	T6-1300-197-27	hose assembly, angling ram, 1/4"x45" (notes 4, 5)	2	"
64-25	—	-----	5/8-11NCX3-1/4"	hex head bolt	4	"
64-26	136	11006	T6-1300-197-16	hinge pin (note 7)	2	"
64-27	136	21984	T6-1300-197-16A	spring clip (note 7)	2	"
64-	136	10514	T6-1300-197-47	lift arm	1	"
64-	136	14618	T6-1300-197-202	lower support, a-frame, bumper mount	1	"
64-	136	O4580	T6-1300-197-203	upper mount, power unit, bumper mount	2	"
64-	136	O7831	T6-1300-197-204	seal kit, angling ram	2	Note 8
64-	136	O7705	T6-1300-197-205	seal kit, angling ram	2	Note 9
64-	136	O7832	T6-1300-197-206	gland nut, angling ram	2	Note 8
64-	136	O7805	T6-1300-197-207	gland nut, angling ram	2	Note 9
64-	136	O7773	T6-1300-197-208	guide ring, split	2	Note 9

Note: tractors equipped with snow plow must be equipped with a 70 amp alternator.

4. Right hand angling ram with fittings T6-1300-197-25 includes angling ram T6-1300-197-25A (item 22), 1/4-inch 90° swivel E-11 T6-1300-197-26 (item 23), 1/4-inch coupler T6-1300-197-28 (item 24) and 1/4-inch x 45-inch hose T6-1300-197-27.

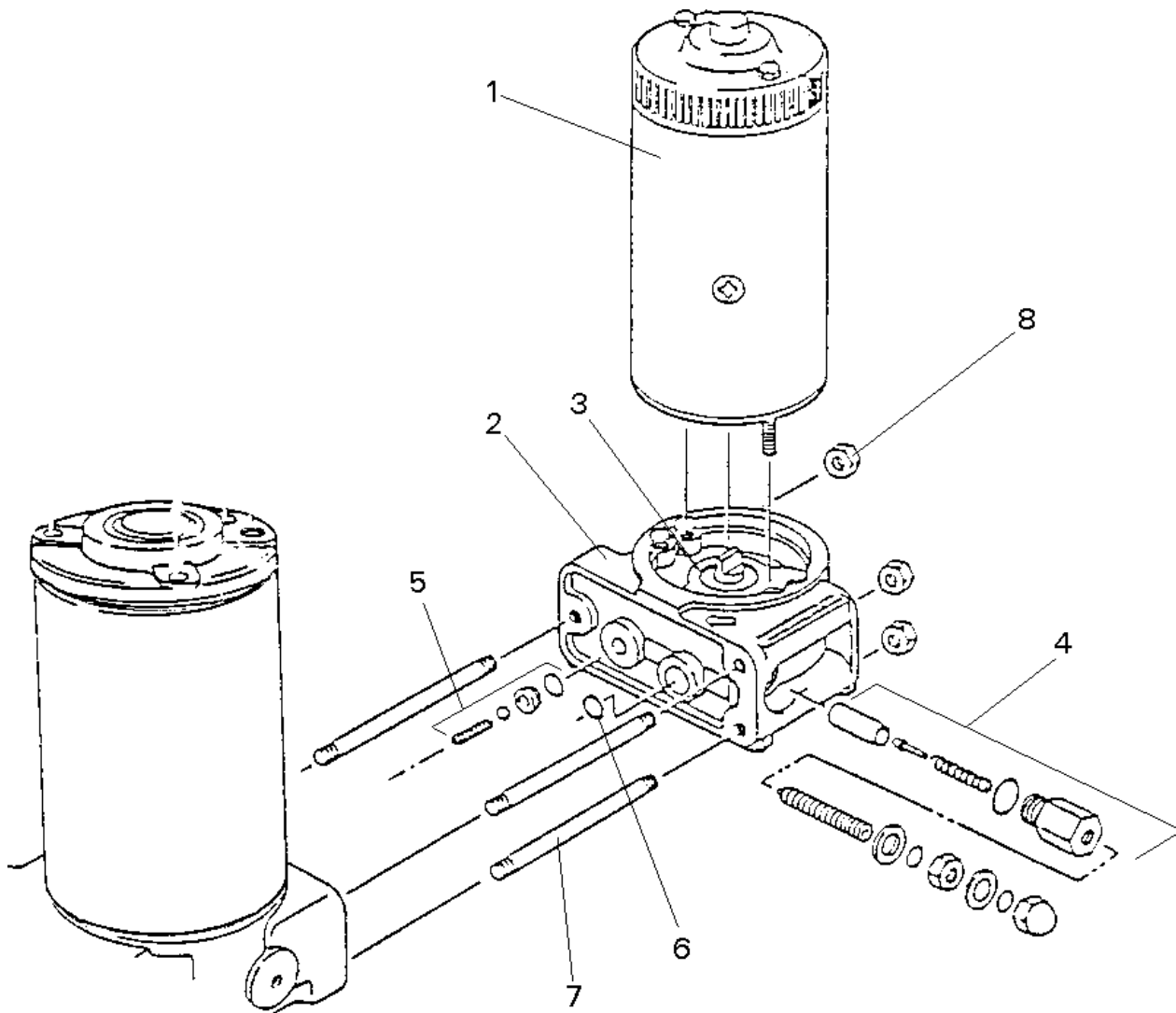
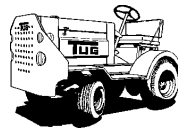
5. Left hand angling ram with fittings T6-1300-197-24 includes angling ram T6-1300-197-25A (item 22), 1/4-inch 90° swivel E-11 T6-1300-197-26 (item 23) and 1/4-inch x 45-inch hose T6-1300-197-27.

6. 1/4-inch coupler T6-1300-197-28 (item 24) includes male and female halves.

7. HInge pin T6-1300-197-16 (item 26) includes spring clip T6-1300-197-16A (item 27).

8. Seal kit T6-1033-204 and gland nut T6-1300-197-206 are used on angling ram with "M" or "MRM" manufacturing code stamped on the end of the ram. These rams do not have split guide rings.

9. Seal kit T6-1033-205, gland nut T6-1300-197-207 and split guide ring T6-1300-197-208 are used on angling ram with a split guide ring symbol manufacturing code stamped on the end of the ram.



**Figure 65: Snow Plow Hydraulic
Pump Assembly**

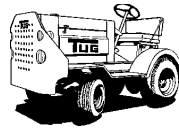


Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
65-	136	15153	T6-1300-197-50	pump and motor assembly, complete	1	As Req'd
65-1	136	15054	T6-1300-197-51	motor, 12-volt	1	"
65-2	136	15206	T6-1300-197-52	pump assembly	1	"
65-3	136	15581	T6-1300-197-53	shaft seal	1	"
65-4	136	15611	T6-1300-197-148	relief valve kit, hydraulic pump	1	"
65-5	136	15574	T6-1300-197-77	check valve kit, hydraulic pump	1	"
65-6	136	21929	T6-1300-197-86	o-ring, 5/8" i.d. (note 1)	1	"
65-7	136	15043	T6-1300-197-76	stud, pump housing	3	"
65-8	---	-----	5/16-24NF	locknut	3	"
65-	136	15456	T6-1300-197-170	master seal kit, hydraulic power unit (note 1)	1	"
65-	----	-----	T6-1300-1972	Lift Assembly	1	"

1. Master seal kit T6-1300-197-170 includes 5/8-inch I.D. O-ring T6-1300-197-86 (item 6) and various other seals used in the lifting ram and electro-hydraulic control unit.

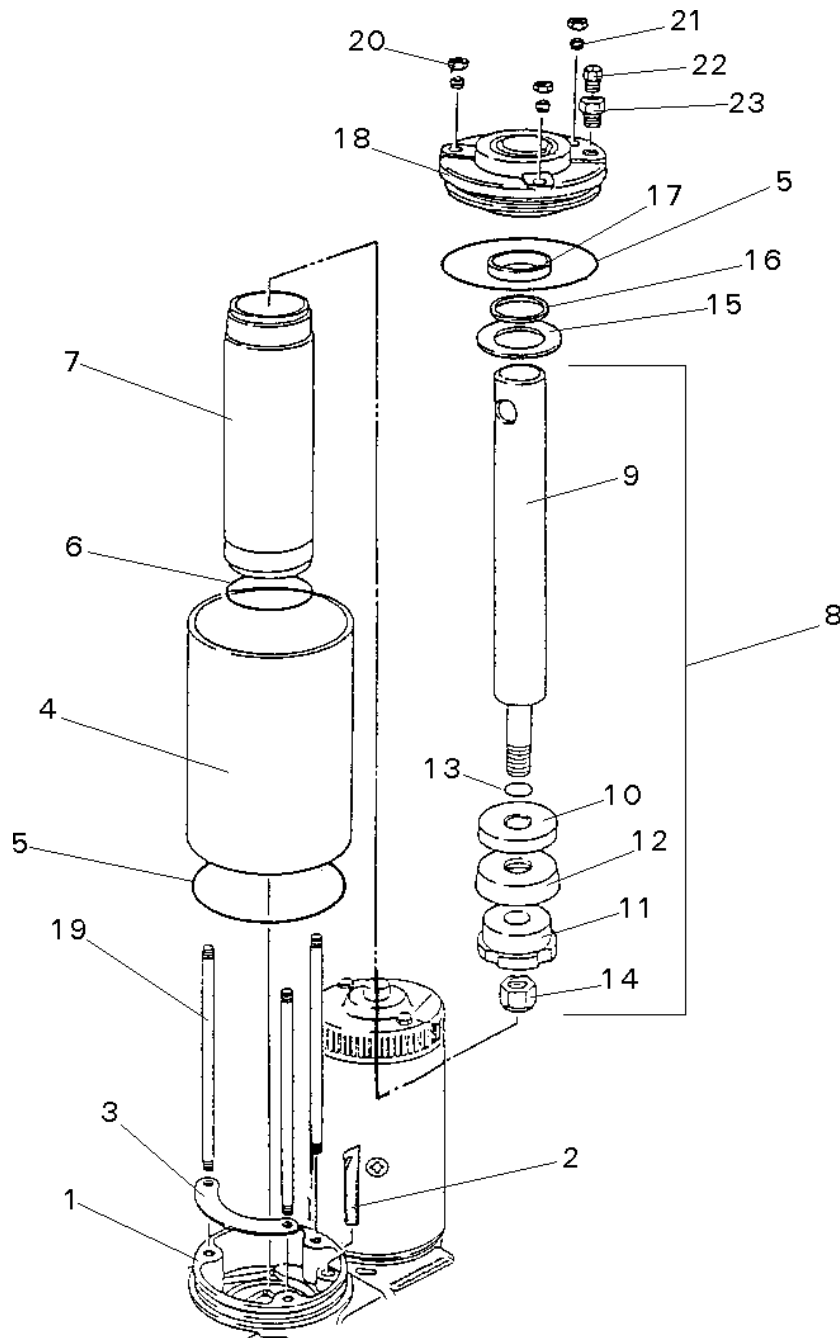
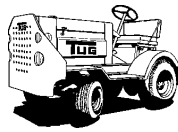


Figure 66: Snow Plow Lifting Ram Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
66-1	136	15573	T6-1300-197-73	base and strainer assembly	1	As Req'd
66-2	136	15326	T6-1300-197-74	strainer	1	"
66-3	136	15621	T6-1300-197-131	baffle	1	"
66-4	136	15045	T6-1300-197-54	cylinder tank	1	"
66-5	136	15131	T6-1300-197-55	o-ring, 3-1/2" i.d. (note 1)	2	"
66-6	136	15163	T6-1300-197-56	o-ring, 1-15/16" i.d. (note 1)	1	"
66-7	136	15207	T6-1300-197-64	cylinder, lifting ram	1	"
66-8	136	15535	T6-1300-197-66	lifting ram assembly	1	"
66-9	136	15208	T6-1300-197-66A	lifting ram	1	"
66-10	136	15158	T6-1300-197-67	piston, lifting ram	1	"
66-11	136	15219	T6-1300-197-68	piston follower, lifting ram	1	"
66-12	136	15162	T6-1300-197-69	packing cup, lifting ram (note 1)	1	"
66-13	136	15125	T6-1300-197-70	o-ring, 7/16" i.d. (note 1)	1	"
66-14	—	-----	1/2-13NC	locknut	1	"
66-15	136	15209	T6-1300-197-65	washer	1	"
66-16	136	15198	T6-1300-197-57	o-ring, 1-1/8 i.d. (note 1)	1	"
66-17	136	15199	T6-1300-197-61	sleeve	1	"
66-18	136	15194	T6-1300-197-58	cover and seal assembly	1	"
66-19	136	15042	T6-1300-197-75	stud, ram assembly	3	"
66-20	—	-----	5/16-24NF	locknut	3	"
66-21	136	21929	T6-1300-197-87	washer, nylite, 5/16" (note 1)	3	"
66-22	136	21806	T6-1300-197-63	relief valve (note 2)	1	"
66-23	136	21805	T6-1300-197-62	reducer, 1/4"-1/8" (note 2)	1	"
66-	136	O8473	T6-1300-197-63A	relief valve kit (note 2)	1	"

1. Master seal kit T6-1300-197-170 includes items 5, 6, 12, 13, 16 and 21, as well as various other seals used in the hydraulic pump and electro-hydraulic control unit.
2. Relief valve kit T6-1300-197-63A includes relief valve T6-1300-197-63 (item 22) and 1/4-inch to 1/8-inch reducer T6-1300-197-62 (item 23).

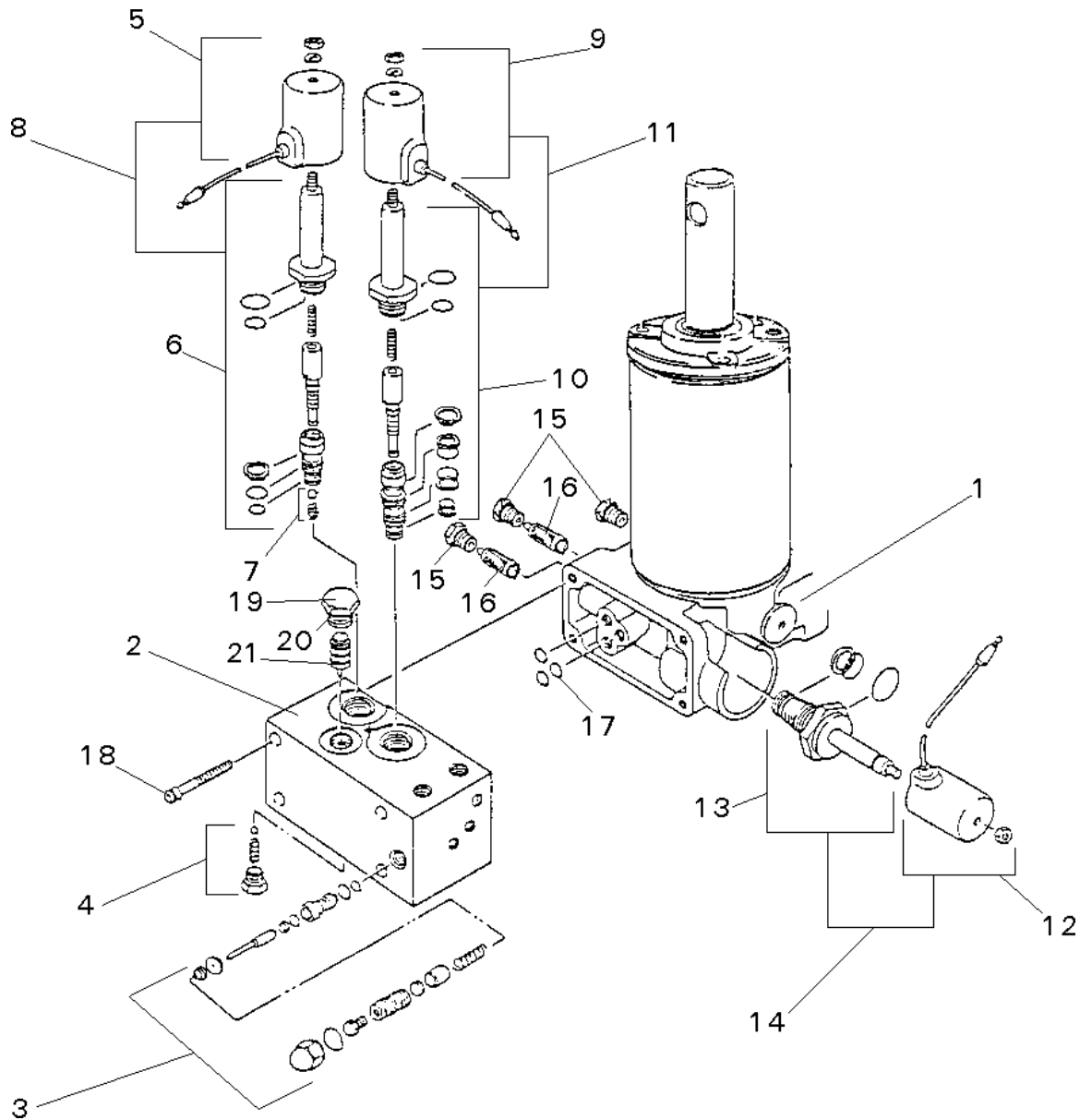
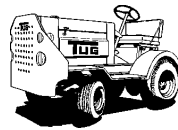


Figure 67: Snow Plow Electro-Hydraulic Controls Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
67-1	136	15573	T6-1300-197-73	base and strainer assembly	1	As Req'd
67-2	136	15598	T6-1300-197-48	valve assembly with couplings and hoses	1	"
67-3	136	15606	T6-1300-197-92	crossover valve kit	1	"
67-4	136	15639	T6-1300-197-107	pilot check valve kit	1	"
67-5	136	15832	T6-1300-197-120	coil, b-solenoid (red wire)	1	"
67-6	136	15830	T6-1300-197-121	cartridge, b-solenoid valve	1	"
67-7	136	15576	T6-1300-197-125	check valve kit, b-solenoid valve	1	"
67-8	136	15357	T6-1300-197-119	valve assembly, complete, b-solenoid	1	"
67-	136	15432	T6-1300-197-169	seal kit, b-solenoid valve (note 1)	1	"
67-9	136	15430	T6-1300-197-123	coil, c-solenoid (green wire)	1	"
67-10	136	15381	T6-1300-197-124	cartridge, c-solenoid valve	1	"
67-11	136	15358	T6-1300-197-122	valve assembly, complete, c-solenoid	1	"
67-	136	15433	T6-1300-197-166	seal kit, c-solenoid valve (note 1)	1	"
67-12	136	15659	T6-1300-197-90A	coil, a-solenoid (black wire)	1	Note 2
	136	15392	T6-1300-197-90B	coil, a-solenoid (black wire)	1	Note 3
67-13	136	15660	T6-1300-197-91A	cartridge, a-solenoid valve	1	Note 2
	136	15393	T6-1300-197-91B	cartridge, a-solenoid valve	1	Note 3
67-14	136	15661	T6-1300-197-89A	valve assembly, complete, a-solenoid	1	Note 2
	127	D52	T6-8013-201	brake pads kit, organic	2	"
	22	AS-781	T6-8013-111	brake pads kit	2	128-2116
	127	D11	T6-8003-105	brake pads kit	2	001-127
	136	15356	T6-1300-197-89B	valve assembly, complete, a-solenoid	1	Note 3
67-	136	15431	T6-1300-197-49	seal kit, a-solenoid valve (note 1)	1	"

1. Master seal kit T6-1300-197-170 includes solenoid valve seal kits T6-1300-197-169, T6-1300-197-166 and T6-1300-197-149, 1/4-inch O-ring T6-1300-197-82 (item 17) and 9/16-inch T6-1300-197-118 (item 20), as well as various other seals used in the hydraulic pump and lifting ram.
2. Used with later style A-solenoid valves having a 9/16-inch valve stem.
3. Used with early style A-solenoid valves having a 3/8-inch valve stem.

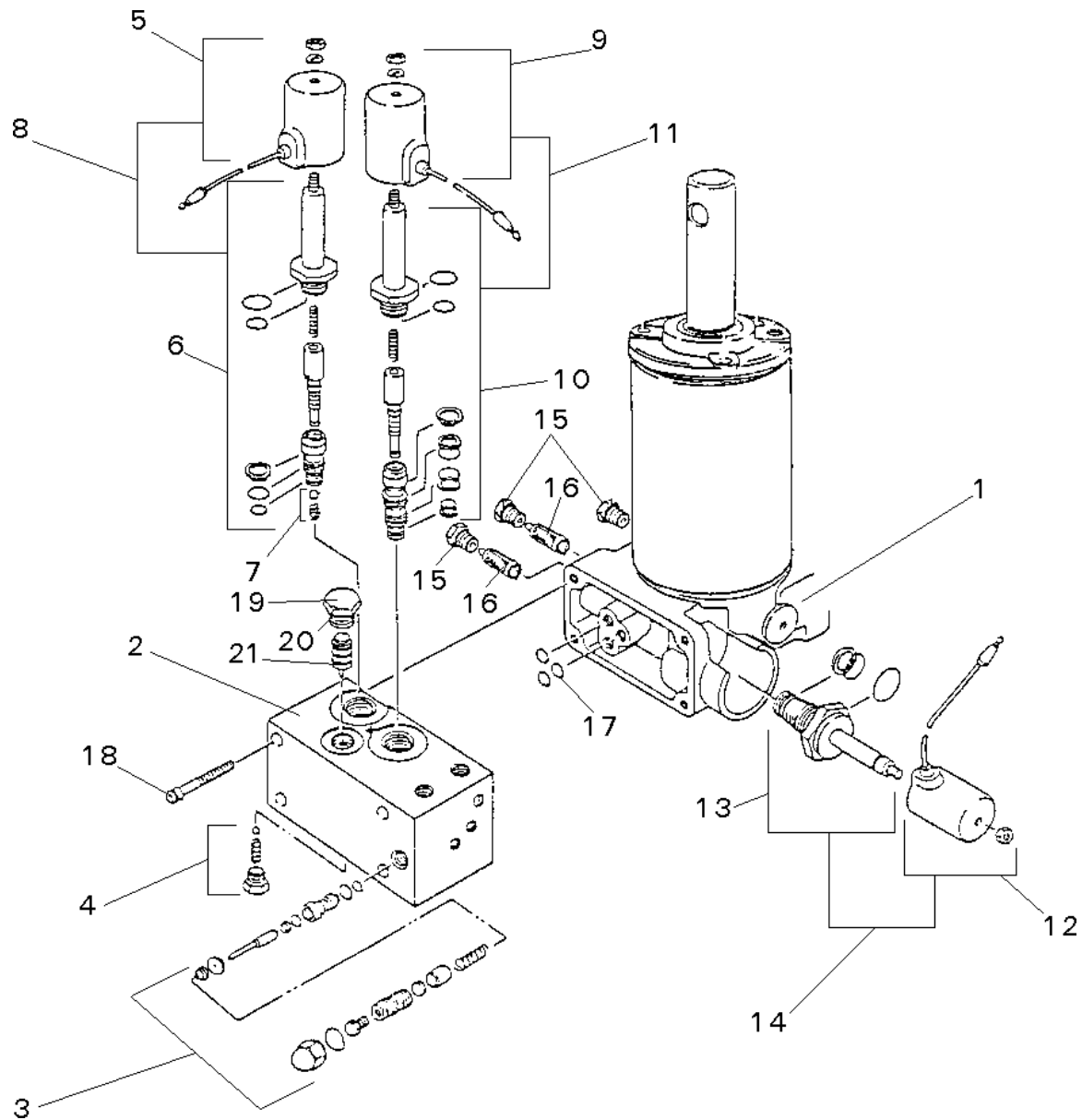
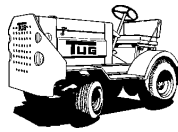
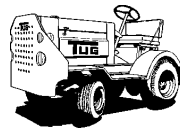


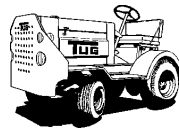
Figure 67: Snow Plow Electro-Hydraulic Controls Assembly

Fig & Ind#	Co de	Vendor Part Number	Tug Part Number	Description	Qty	Effective
67-15	136	21827	T6-1300-197-85A	plug with o-ring, 1/2" (note 4)	Ref.	As Req'd
	136	21999	T6-1300-197-85B	plug with o-ring, 9/16" (note 5)	Ref.	"
67-16	136	15619	T6-1300-197-84	filter (note 4, 5)	2	"
67-	136	15620	T6-1300-197-83A	filter kit, 1/2" (note 4)	2	"
	136	15641	T6-1300-197-83B	filter kit, 9/16" (note 5)	2	"
67-17	136	15122	T6-1300-197-82	o-ring, 1/4" i.d. (note 1)	3	"
67-18	—	-----	5/16-18NCX1-1/2"	socket head cap screw	4	"
67-19	136	15359	T6-1300-197-117	plug, valve block (note 6)	1	"
67-20	136	15126	T6-1300-197-118	o-ring, 9/16" i.d. (notes 1, 6)	1	"
67-21	136	15609	T6-1300-197-116	piston	1	"
67-	136	15370	T6-1300-197-23	starter solenoid, hydraulic pump	1	"
67-	136	22092	T6-1300-197-20	switch, 4-way, lift/angle (note 7)	1	"
	136	21918	T6-1300-197-31	lift switch (note 7)	1	"
	136	21919	T6-1300-197-32	angle switch (note 7)	1	"
67-	136	15680	T6-1300-197-22A	wire harness, single lever switch (note 7)	1	"
	136	15478	T6-1300-197-22	wire harness, dual lever switch (note 7)	1	"
67-	136	15671	T6-1300-197-29	cable, starter solenoid to hydraulic pump, 63", red (note 8)	1	As Req'd
67-	136	15672	T6-1300-197-30	ground cable, 42", black (note 8)	1	"
67-	136	O5024	T6-1300-197-29A	power cable, battery to starter solenoid, 36" (note 8)	1	"
	----	-----	T6-1300-197	Snow Plow Kits	Ref	"

1. Master seal kit T6-1300-197-170 includes solenoid valve seal kits T6-1300-197-169, T6-1300-197-166 and T6-1300-197-149, 1/4-inch O-ring T6-1300-197-82 (item 17) and 9/16-inch T6-1300-197-118 (item 20), as well as various other seals used in the hydraulic pump and lifting ram.
2. Used with later style A-solenoid valves having a 9/16-inch valve stem.
3. Used with early style A-solenoid valves having a 3/8-inch valve stem.
4. 1/2-inch filter kit T6-1300-197-83A includes 1/2-inch plug with O-ring T6-1300-197-85A and filter T6-1300-197-84 (item 16).
5. 9/16-inch filter kit T6-1300-197-83B includes 9/16-inch plug with O-ring T6-1300-197-85B and filter T6-1300-197-84 (item 16).
6. Valve block plug T6-1300-197-117 (item 19) includes 9/16-inch O-ring T6-1300-197-118 (item 20).
7. 4-way switch T6-1300-197-33 replaces both switches T6-1300-197-31 and T6-1300-197-32 on later model tractors equipped with snow plow.
8. Cable length may vary slightly.



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III. NUMERICAL INDEX

A. DISCUSSION

The Numerical Index provides a ready reference listing of all parts referred to in the Illustrated Parts List, and the figure and index number under which each part is listed. In addition, space is provided in the Numerical Index for locally established part numbers to be entered by the end user.

The part numbers listed in the numerical index is the Tug part number when one has been assigned. Where no Tug number has been assigned, the vendor part number is listed in the index.

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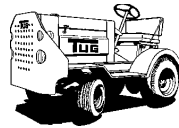
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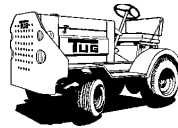
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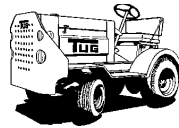
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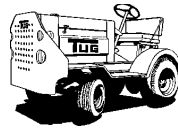
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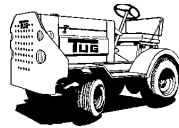
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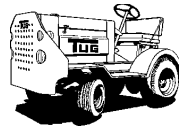
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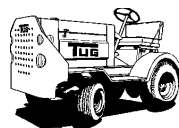
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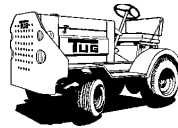
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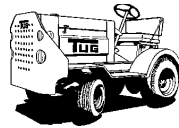
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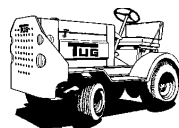
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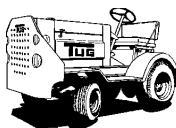
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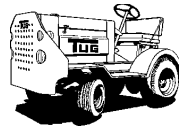
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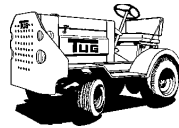
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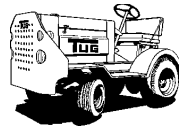
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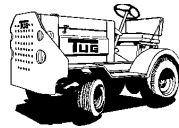
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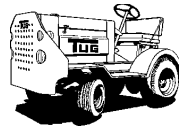
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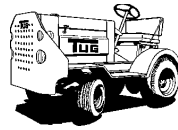
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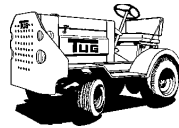
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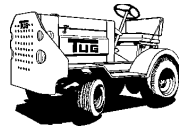
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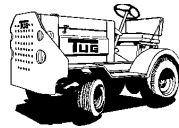
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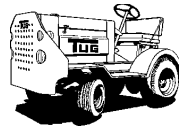
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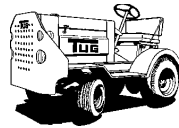
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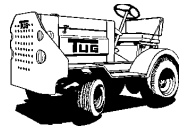
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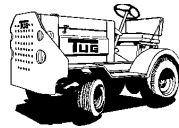
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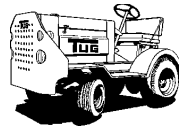
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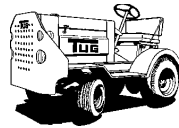
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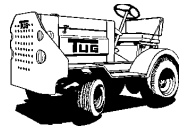
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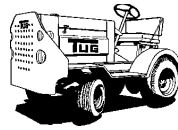
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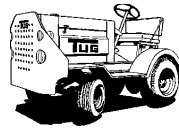
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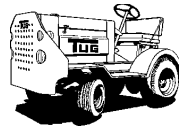
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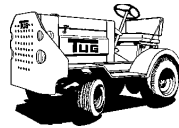
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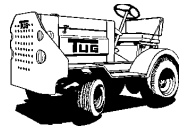
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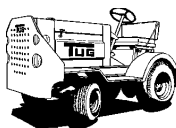
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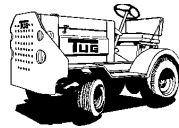
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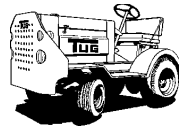
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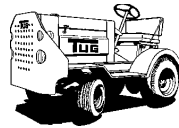
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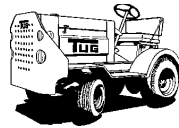
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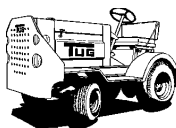
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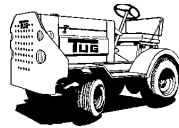
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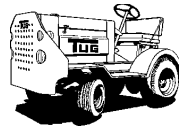
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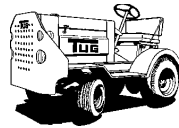
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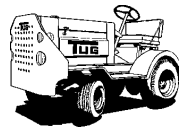
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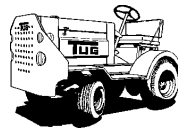


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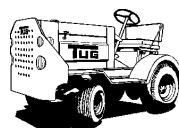
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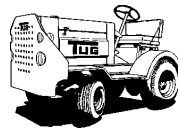
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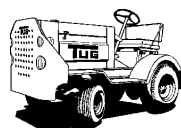
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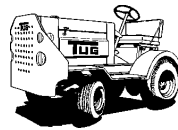
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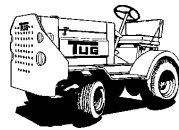
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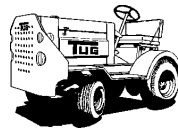
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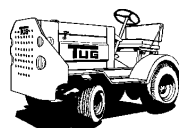
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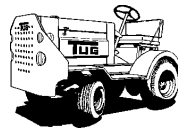
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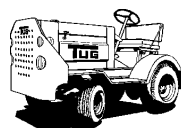
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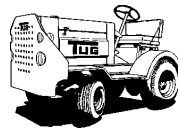
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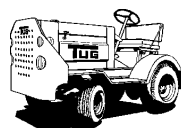
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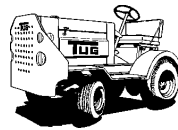
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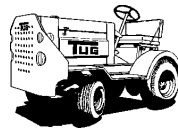


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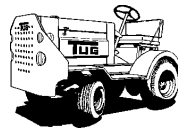
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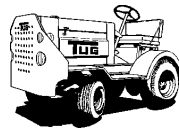


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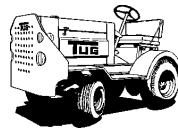
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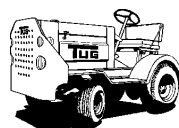
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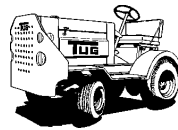
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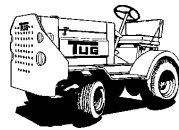
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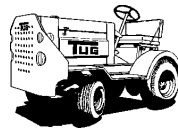
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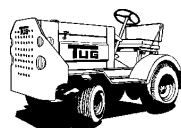
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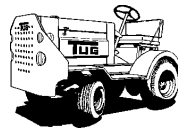
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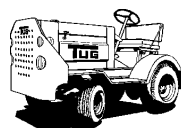
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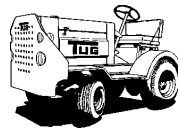
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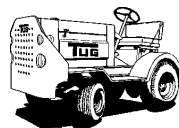
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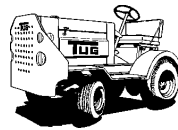
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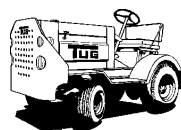
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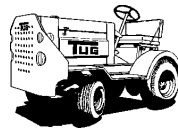
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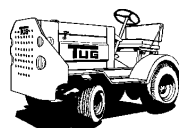
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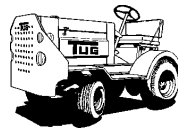
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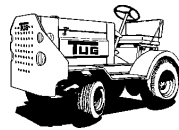
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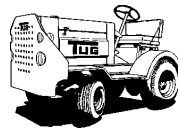
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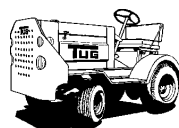
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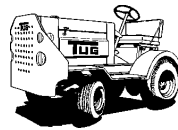
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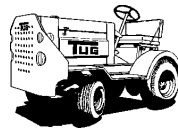
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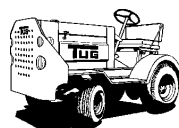
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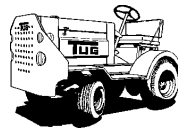
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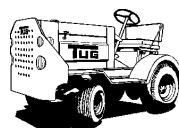
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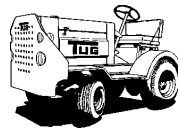
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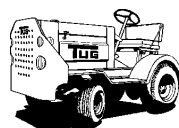
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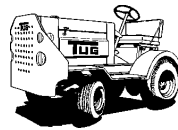
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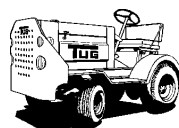
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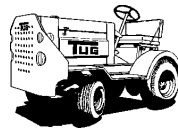
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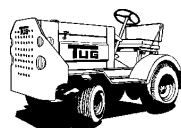
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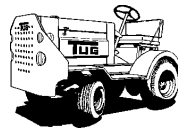
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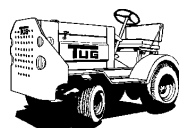
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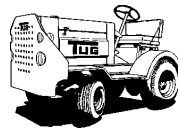
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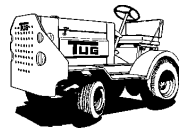
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